

FLOW

THE FIRST MAGAZINE OF MATERIAL HANDLING

FEBRUARY 1958

SPECIAL FEATURE:

GERTRUDE

The world's first
completely automatic
order picking system.

ATTACHMENTS FOR
POWER CRANES &
SHOVELS page 62

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... The original publication of the material handling industry
... preferred by more than 40,000 identified buyers of material
handling, packaging and shipping equipment and supplies.



AN INDUSTRIAL PUBLISHING CORPORATION MAGAZINE

FORGED STEEL FOR SURPLUS STRENGTH

**H 1600
HEAVY DUTY**

NOELTING Faultless Caster

EXCLUSIVE HORN CONSTRUCTION RESISTS SHOCKS, PROTECTS LOADS

For safe movement of tremendous loads on casters capable of resisting high impact shocks, yet swivel and roll with minimum effort, Faultless presents a materials-handling man's answer in the H1600 Forged Steel Caster.

Faultless design engineers drew on a background of more than fifty years experience with caster problems when they perfected an exclusive heavy duty horn design pronounced the most durable forged steel construction ever offered in a caster.

The cutaway illustration shows the large diameter raceway and large ball bearings that carry the load around machined hardened surfaces. A Timken combined radial and thrust bearing is nested in the horn top plate. Timken tapered roller bearings are also furnished in the Forged Steel and Semi-steel wheels.

ASK YOUR DISTRIBUTOR

If your movements of excessively heavy loads are encountering high impact shocks, your problem will be solved with this new H1600 Series Forged Steel Caster. Your nearby Faultless Industrial Distributor maintains a substantial inventory of Faultless Casters for immediate delivery. Call him today about this new H1600 Series Caster.



Exclusive with Faultless

For the most durable construction possible to make Faultless engineers machined the heavy drop forged horn top plate to form strong shoulders against which the heavy steel side members or legs are securely welded. The load strains are thus transferred from the welding bead to the top plate—the most durable forged steel construction made.

**H 1600 SERIES HEAVY DUTY CASTER
SHOWN WITH FORGED STEEL WHEEL**



DESIGN FEATURES

1. **HEAVY DROP FORGED CASTER TOP PLATE** machined for load bearing balls.
2. **HEAVY DROP FORGED HORN TOP PLATE** machined for load and thrust bearing raceways.
3. **SWIVEL HEAD** consists of a complete row of hardened ball bearings operating in lubricated machined raceway and Timken combined radial and thrust bearing. Raceways case-hardened.
4. **CASTER HORN LEGS** made of heavy steel, deeply embossed and formed for additional strength. The embossing forms a shoulder to prevent axle from turning. **NOTE:** The forged top plate of the horn is machined to form a perfect shoulder against which the side members or legs of the horn are securely welded, thus transferring the strains from the welding bead to the top plate—the most

durable forged steel construction made—an exclusive **FAULTLESS** feature.

5. **ADJUSTABLE KING BOLT** 1" in diameter, assembled with lock-nut and securely staked.

6. **AXLE BOLT** 1" in diameter. Bolt head held against horn embossing shoulder to prevent axle turning. Heavy duty lock nut is standard.

7. **WHEEL**—Forged steel wheel supplied in 6" size. Semi-steel wheel supplied in 8" size. Vulcanized rubber tread wheel supplied in 6" and 8" sizes. Roller bearing standard in all wheels. Timken tapered bearings can also be supplied in forged and semi-steel wheels.

8. **GREASE FITTINGS** easily accessible for fast, thorough lubrication of swivel head and wheel.

9. **FINISH**—lustre green lacquer.

Faultless Caster Corporation EVANSVILLE 7, INDIANA

Offices in Atlanta, Baltimore, Boston, Buffalo, Chicago, Cleveland, Dallas, Detroit, Grand Rapids, High Point,

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there's a Goodyear dealer
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Pile it on

These tires can take it!



ALL-SERVICE TREAD XTRA CUSHION SOLID TIRE

—built with compact lug
design for fast, easy rolling
with greater smoothness
and stability

**ALL-WEATHER
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for ramps, wet surfaces and
other extra-traction conditions



**GROOVED TREAD
SOLID TIRE**
—built to take heavy
punishment on big trucks

SMOOTH-SOLID TIRE
—for factory, warehouse and
loading platform



THAT AIN'T hay these fork lifts are loading. It's heavy steel scrap. So the plant management wisely specified Goodyear Pressed-On Solid tires for their trucks. And with good reason.

These tires are made with tougher compounds to reduce cutting, chipping, tearing—insure lower tire cost. Equipment down time is saved because Goodyear Industrial Tires are designed to absorb more shock, give longer life to equipment. These durable tires are easy on floors, too, because their resilient rubber cushions the loads and prevents damage.

If you've got a tough materials handling job to do, do it on Goodyear Industrials. Your Goodyear Dealer will be glad to job-fit the tire for you.

Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Use the Right Tire for the Job —
Buy and Specify

GOOD YEAR



INDUSTRIAL TIRES

All-Service, All-Weather, Xtra Cushion
•T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

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FEBRUARY, 1958

3 mobile units

for plant lifting jobs

• A UNIT Mobile Crane is just what you need for the many material handling jobs around your plant. Mounted on rubber and self-propelled, the machine travels anywhere and works efficiently, *even in small yards where space is limited*. Easy hydraulic steering and operating controls from within the FULL VISION CAB give the operator complete visibility for SAFE loading and unloading. For faster material handling and lower operating costs, investigate these Mobile UNITS.

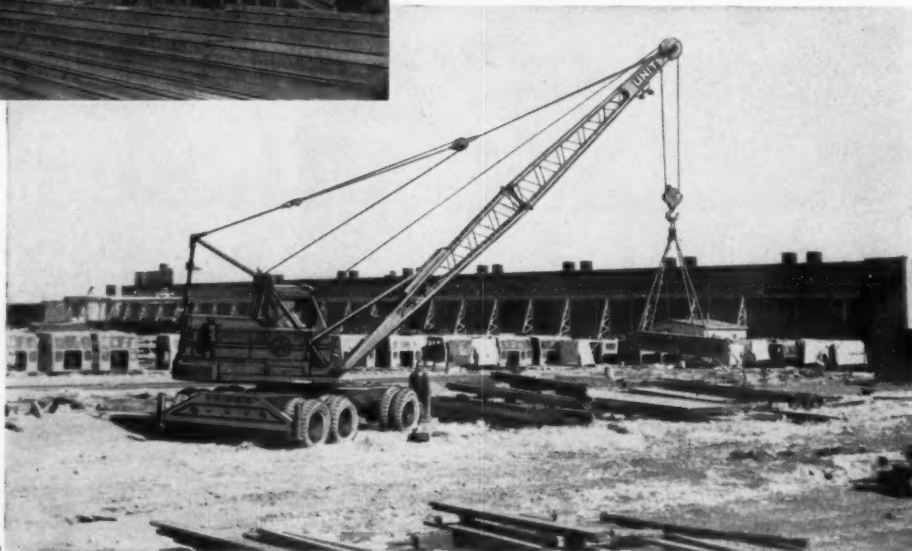


UNIT 357 MOBILE CRANE — powered by one engine — controlled and operated by one man — short turning radius — air operated transmission — hydraulic steering — mounted on six pneumatic tires, duals on rear — capacity 10 tons.



UNIT 1520T designed for heavy duty truck crane operation. Lifting capacity up to 20 tons. Also available is a **UNIT 1014 TRUCK CRANE** having a lifting capacity of 15 tons at a 10 foot radius.

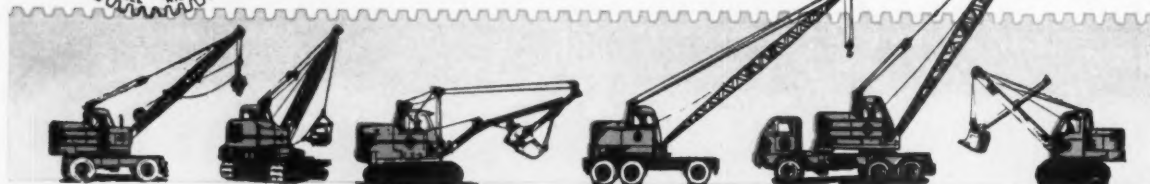
UNIT 1520 Heavy-Duty Mobile Crane with lifting capacity up to 20 tons. Mounted on twelve pneumatic tires with duals on steering axle and tandem rear axles.



Bulletins available on each of the above models.
Write for your copies.

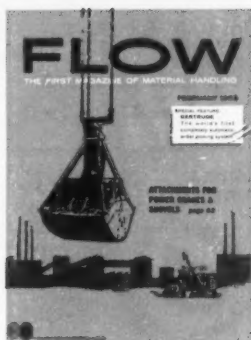
UNIT CRANE & SHOVEL CORP.

6531 W. Burnham Street • Milwaukee 14 Wisconsin



A7-5011

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COVER: Handling bulk material is always a big job. If you use the right equipment, and use it correctly, you can save money and increase handling efficiency. Type of material, weight of material, depth of cuts, clearances, and volume of work can affect the equipment you select. See "Attachments for Power Cranes and Shovels" . . . page 62.

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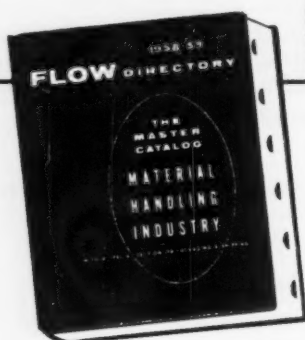
PACKAGING/SHIPPING

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A fragile item packaged in a specially constructed shipping container



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THE MOST WIDELY USED REFERENCE IN THE MATE- RIAL HANDLING INDUSTRY

The only complete volume of authoritative information about material handling, packaging and shipping equipment and accessories. Its definitions are used as standard by all engineering societies, by virtually all associations, and by military and industrial groups.

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City

FLOW

the first magazine of material handling

volume 13 number 5

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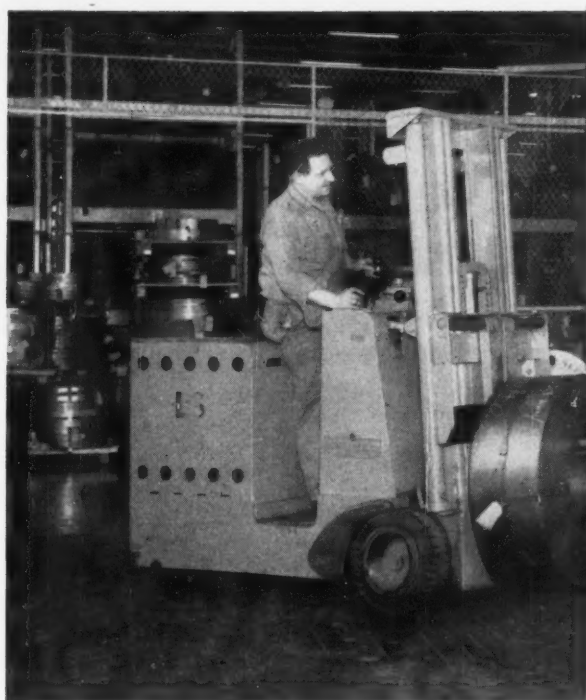
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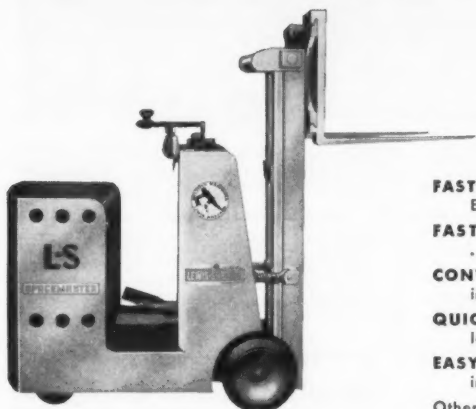
NEXT MONTH IN FLOW

you will read about . . .
a brand new system for handling polyethylene at Western Electric Co. . . . How to schedule material handling by linear programming . . . New methods which you can use to handle rolls on conveyors . . . Unique "erector set" crating being used by Convair to ship airplane wings.



**DO 20%
MORE WORK**

**WITH MODEL "E"
SPACEMASTER
ELECTRIC FORK TRUCKS**



MODEL E SPACEMASTERS
are made in five models to handle loads of 1,000, 1,500, 2,000, 3,000 or 4,000 lbs. Many standard attachments are available for specific work.

The entire control compartment with magnetic control panel, hydraulic control valves, operating levers, etc., is immediately accessible by turning quick-lock fasteners and removing plate.

FAST ACCELERATION L-S Electrics are fast with their timed acceleration . . . and L-S Electrics are ideal for "stop and go" operation.

FAST LIFT Fingertip operation . . . up to 55 FPM lift speed (loaded) depending on model . . . one of the fastest on the market.

CONVENIENT STANDRIDE For fast, easy "on and off" driving with superior visibility in either direction.

QUICK DIRECTIONAL CHANGE Magnetic Controls . . . no clutch . . . operation of one lever changes speed and direction.

EASY TO REVERSE Dynamic Braking for smooth, even stops plus Controlled Plugging for instantaneous and smooth reversal of direction.

Other important features include: Center Control, Lifetime Lubrication, Top Stability with rugged I-Beam Mast, Matchless Comfort and Safety, Heavy Duty Drive Assembly and Traction Motor.

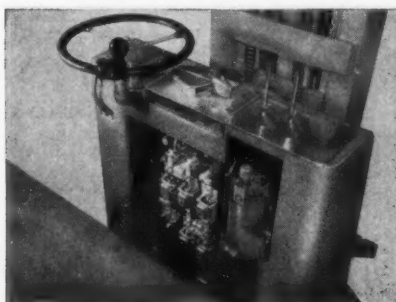
"Step on and GO!" . . . it's as fast and simple as that to put a Model "E" Spacemaster into action. No warm-ups, no gas-ups and no wasteful idling between jobs. Spacemaster is ideal for stop-and-go . . . on-and-off operation.

Mail coupon below for more information.



The "MASTER" Line

LEWIS-SHEPARD®
The COMPLETE line of Materials Handling Equipment



LEWIS-SHEPARD PRODUCTS, INC.

132 Walnut Street
Watertown 72, Mass.

Please send me your complete Catalog No. 32-1 on all L-S Model "E" Spacemaster Electric Fork Trucks.

Name _____ Title _____
Company _____
Address _____
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New "Positioned Inventory" Principle Reduces Your Inventory Investment

Rapistan® Flow Rack™ Puts Parts Where Needed, When Needed, Reduces Costs

You can save up to one-third of your inventory investment in materials and goods in process with this new materials handling principle of work-positioned inventory at the point of use. With the present cost of carrying inventory often running as high as 25% of the value of the goods, this savings of capital can be an important factor in improving your company's profit.

"Work-positioned inventory" is simply the principle of storing raw materials, components or sub-assemblies as close and as convenient as possible to the areas in which they are used. Rapistan Flow Rack makes this idea practical for a wide range of uses.

The possibilities for space and labor savings are large when working inventory is "positioned at the point of use."

1. Space required for the plant's Central Stores is reduced, releasing valuable floor area for more productive uses. Gains of one-half and more of the central stores area often are possible.
2. Materials handling is reduced, making possible a great saving in time and



ELECTRIC MOTORS ARE STORED by the pallet-load in this Flow Rack, "work-positioning" a large inventory in minimum space. Motors are easily removed, simply by extending the pallet a short distance beyond the face of the rack.



A RAPISTAN FLOW RACK accumulator receives incoming stocks of assembly parts directly from Receiving. No stop-over in central stores for these parts — no double handling. Flow Rack, stocked from the rear, assures "FIFO" inventory control.

- manpower. Double handling can be eliminated, when materials go from Receiving directly to Flow Rack at the "point of use."
3. The required volume of inventory usually is reduced, since purchasing can be accurately geared to shorter time segments, and more exactly controlled.
4. Inventory control is improved. Flow Rack, used to hold materials in live storage at the point of use, provides an automatic "first in — first out" control system. "FIFO" inventory control is very expensive in most warehouses, not using Flow Rack.

To learn more about how this materials handling technique can improve your company's profit, ask your local Rapistan handling specialist, or write for our "Flow

Rack" bulletin describing specific uses of this idea.

Circle No. 10 on Reader Service Card.

Rapistan Roller Conveyor Now Features Snap-In Interchangeable Rollers

Spring-loaded snap-in rollers make new Rapistan gravity roller conveyor exceptionally versatile. Rollers are easy to re-space in the frame while the conveyor is installed — can be removed or inserted without bolts or wrenches.

Rapistan now offers interchangeable-roller conveyor in many types and sizes of 1.9" roller: aluminum, galvanized or enameled steel, for medium and heavy duty. New reduced prices make it your best gravity roller conveyor value.

For full information, **circle No. 14 on the Reader Service Card.**

Here's A Novel Use For Rapistan Overhead Conveyor

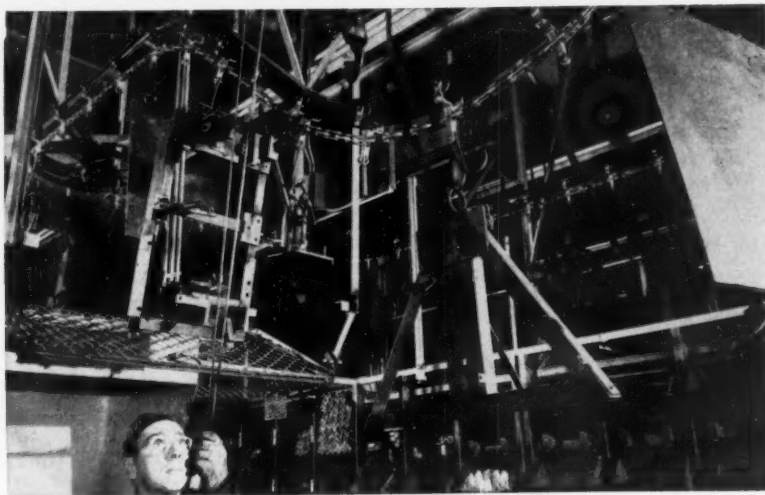
Production Tools Stored Overhead Save Floor Space

Rapistan Overhead Trolley Conveyor serves a new and unique purpose right in our own plant, resulting in improved efficiency and a space saving of 50% in our welding department.

Welding jigs and fixtures are

now stored overhead, where they are quickly accessible and safe from damage. All the floor space formerly used for storing jigs has been reclaimed for production. Quality is improved, since welders can easily find the correct jig to use for even the smallest runs.

For more information on this idea, circle No. 11 on the Reader Service Card.



RAPISTAN OVERHEAD CONVEYOR solves the problem of finding the right welding tool in minimum time. All jigs are numbered and stored according to a master index. The conveyor delivers any required tool to a dip point for easy removal from the line.

"M B" Demountable Wheel Sets New Performance Record

Rapistan Metal-Backed Tires Outwear Competitive Makes

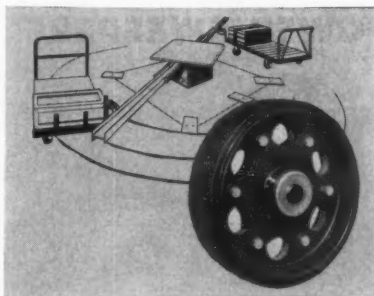
Everybody wins in some performance tests — but not in the scientific wheel-wear tests conducted by engineers at The Rapids-Standard Co., Inc.

Rapistan's new industrial MB (metal-backed) demountable rubber-tired wheel recently was tested against four other makes under identical conditions. Competitive wheel "A" failed at 33.84 miles. Wheel "B" failed at 65.80 miles. "C" failed at 132.54 miles and "D" at 671.16 miles. But Rapistan's MB Wheel ran 1,320 miles with no sign of failure, out-lasting its nearest rival 2 to 1. Documented results of the test are available on request.

If you use industrial wheels and casters, it will pay you to find out about the champion performer in

the field—Rapistan MB demountable wheels.

Circle No. 12 on Reader Service Card.



RUGGED, long-wearing Rapistan MB Wheels come in 6", 8" and 10" diameters, 2" and 2½" tread widths. Rubber tire change is quick and easy with exclusive "star" construction.

"Controlled Flow" Improves All Materials Handling

"Controlled Flow" is important to all users of materials handling equipment, because it is the means of saving unnecessary expense. Its application prevents conveyor jam-ups, jack-knifing on straight conveyor runs, excessive breakage, shifting and slippage on the conveyor, that can reduce the effectiveness of ordinary systems.



Bert Woldring

"Controlled Flow" is simply the smooth, safe and economical movement of goods from one point to another. In a Rapistan system, it's the result of many years of internal experiment, and experience on thousands of conveyor systems.

Rapistan links standard, pre-engineered units of gravity and power belt conveyor into a basic flow system. To this we add engineering know-how in selection of the correct conveyor pitch, proper width of track, length of gravity runs, placement of guard rails, limit switches, spur curves, electric eyes and other controls.

Then, this system is coordinated with existing lift trucks, chutes, racks — all the other elements of mechanical handling. The result is a system that controls the flow of goods efficiently and safely, at a modest investment.

Bert Woldring

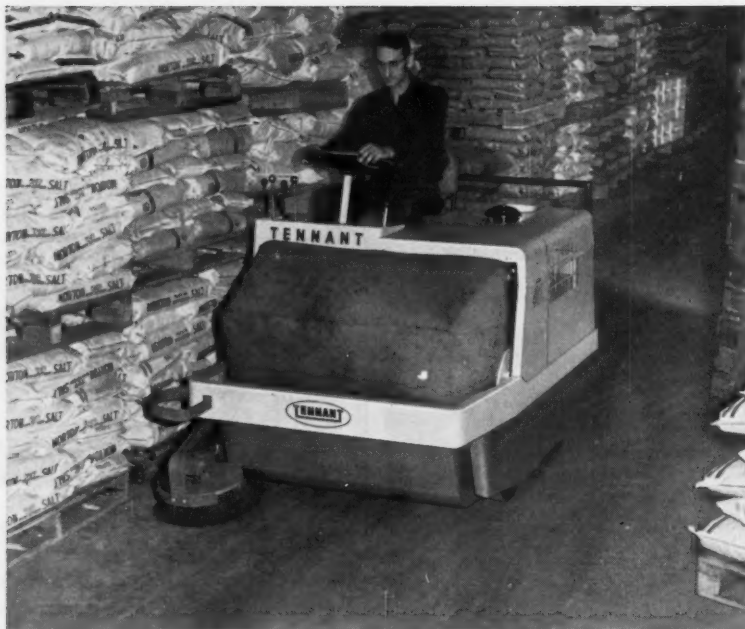


Write today for a check list of important considerations in planning an efficient, economical handling system.

Circle No. 13 on Reader Service Card.

Rapistan®
new ideas in materials handling

The RAPIDS-STANDARD CO., Inc.
330 Rapistan Bldg.
Grand Rapids 2, Michigan



"Aisle-designed" Tennant "80" sweeps efficiently; cleans aisles up to 8 1/2' wide in one round trip

How many dollars will this SWEEPER save you daily?

In a medium-sized Cleveland plant, the "80" Power Sweeper saved \$21 a day in labor costs alone. *That's \$5,460 yearly!*

The exact saving you can expect in your plant depends on factors such as area to be swept, obstructions, and present labor costs.

Time studies show the TENNANT "80" replaces 3 to 15 men with push-brooms. It can sweep over 100,000 sq. ft. an hour in open areas. Under typical conditions, it's not unusual for the "80" to pay for itself in a year's time.

Provides clean, dust-free pickup. With its powerful brush-and-vacuum system, the "80" picks up litter that would be missed with hand sweeping. It easily lifts dirt from cracks; handles heavy, bulky debris as readily as light material. Sweeps 42" to 53" path.

Starts, stops, reverses instantly without shifting gears. Dirt hopper holds up to 800 lbs. **Dumps hydraulically.**

For more information, write G. H. Tennant Company, 707B N. Lilac Drive, Minneapolis 22, Minnesota. You'll be under no obligation.



Industry's Most Widely Used
POWER SWEEPERS



Model 40 Walk-behind Sweeper



Gasoline-powered Model 50 Sweeper



Model 36 Electric Sweeper

SPECIALIZED MAINTENANCE EQUIPMENT

POWER SWEEPERS • FLOOR MACHINES • SCARIFIERS • ROOF SCRAPERS • CONCRETE ROUTERS

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LETTERS

TO THE

EDITORS

Calls Straddle Carrier Over-Rated

To Flow:

With great interest I have perused your article "Straddle Carriers", published in the September, 1957 issue of FLOW.

This article unintentionally confirmed my belief that, at its present development stage, the straddle carrier is quite inefficient as a material handling tool. As the name implies, it is a material *carrying*, not a material *handling* vehicle. The load handling ability of a straddle carrier is hampered by limitations inherent to its basic design.

First of all, a straddle carrier cannot stack loads, and the load area has to be accessible from three sides for pick-up or depositing. Even with relatively low loads, a straddle carrier becomes so high that it cannot travel through standard door openings.

Because these limitations are inherent to this truck, it is doubtful, if even in the future, the design can be improved significantly, other than just adding some gadgets to partially overcome these shortcomings.

In contrast to a straddle carrier, a side loading truck represents almost the ultimate in material handling ability.

Michael Linsay
The Baker-Raulang Co.
Cleveland, Ohio

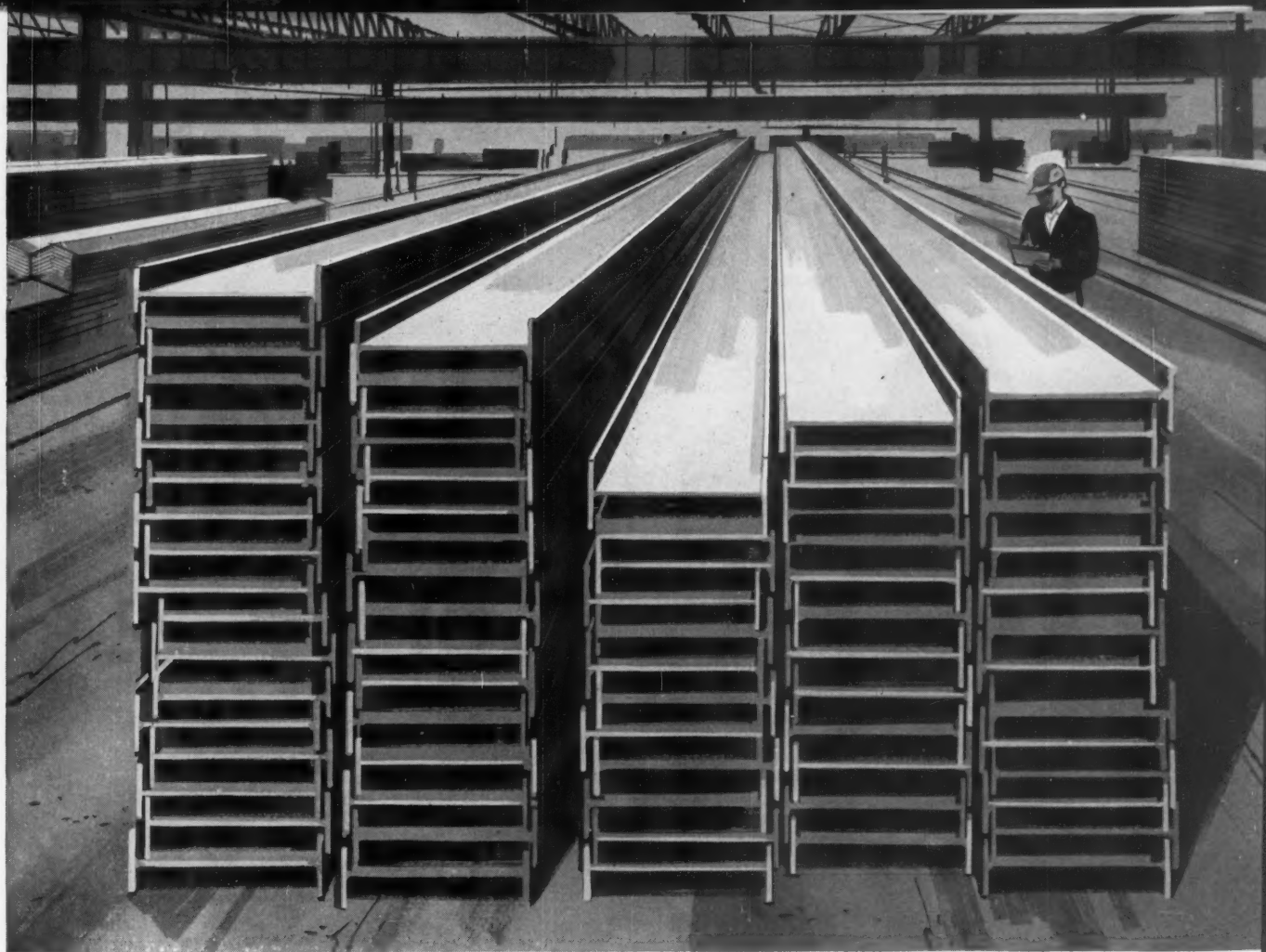
Any rebuttals?

Carboy Truck to the Rescue

To Flow:

I have a prospect who is interested in securing a truck for handling Carboy wooden containers filled with acids.

I am unable to locate any such trucks, and would be pleased to hear from you if you know of



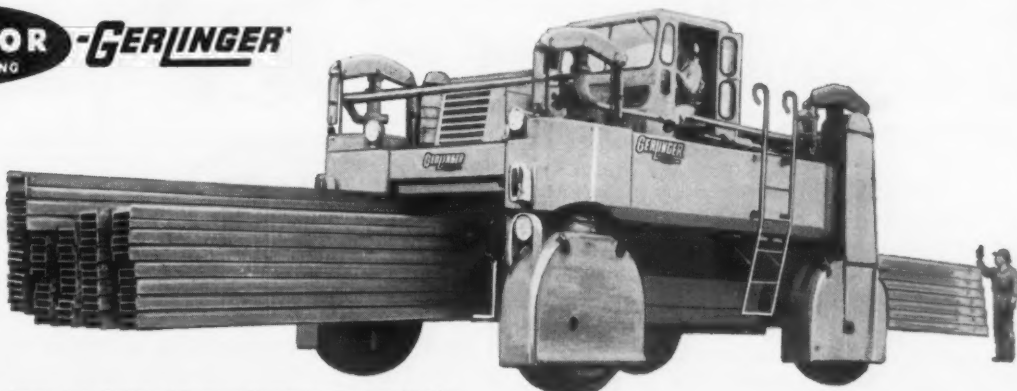
ONE LOAD...One Man...One Trip with a Gerlinger!

Moving 30-ton loads 2000 feet a minute may seem like a "dream" of the future but it's happening right now! It's being done by giant Gerlinger straddle carriers making numerous trips per day and moving *millions of tons a year* for an Eastern steelmill. It's also being done by heavy-duty Gerlinger lift trucks . . . transporting mammoth beams, bulky logs, tremendous pallets of products by the hundreds . . . in one quick, cost-saving trip! Are your increasing demands requiring bigger loads and faster handling? Look to Towmotor-Gerlinger—where "tomorrow's plans" are no longer blueprints, but *realities*. The answer is *here*.

Leaders for 39 years in building
Fork Lift Trucks, Tractors and Carriers



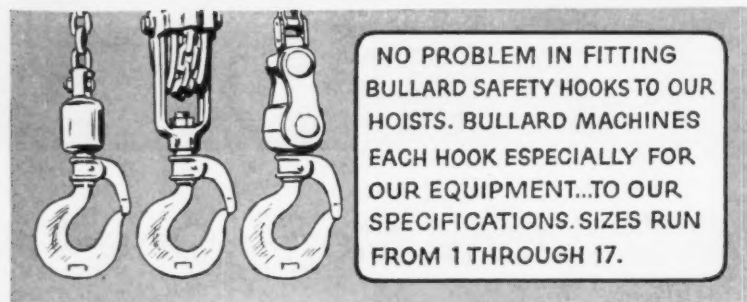
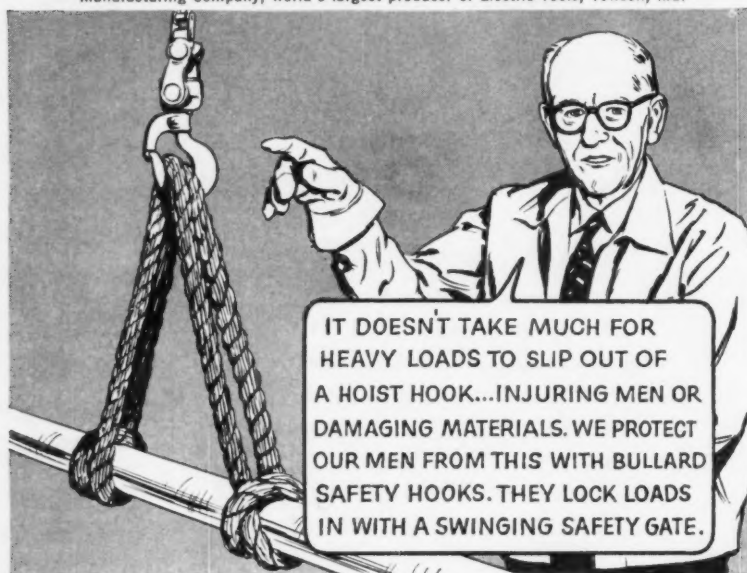
Towmotor-Gerlinger
meets Tomorrow's
Handling
Needs Today!



*Gerlinger Carrier Co., Dallas, Oregon, is a subsidiary of Towmotor Corporation, Cleveland 10, Ohio

WHEREVER WE HAVE HOISTS.... WE HAVE MECHANICAL SAFETY INSURANCE!

... says Charles S. Smickle, Safety and Health Manager of the Black & Decker Manufacturing Company, world's largest producer of Electric Tools, Towson, Md.



Circle No. 90 on Reader Service Card for more information

LETTERS

Continued

any manufacturers who are producing such trucks to handle Carboys.

Milton A. Hawkins
Milton A. Hawkins Co.
New Orleans, La.

Reader Hawkins' request has been turned over to a competent manufacturer who should be able to help him.

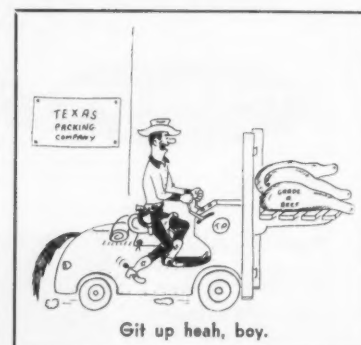
Orchid... and Onions To Flow:

We wish to congratulate FLOW for its November issue, which directs readers' attention to the vital field of distribution. I am sure the valuable ideas contained therein will be given careful reading. I should like to point out, however, that one of the integral parts of our nation's distribution system was overlooked, i. e., the public merchandise warehouseman. Public warehousing continues to expand and grow, while meeting the increasingly complex needs of our distributive system.

We are hopeful that the next time an issue of this type is planned, our industry might be represented in some way through articles, pictures, or other coverage.

Allen D. Walters
American Warehousemen's
Association
Chicago, Illinois

For some time, FLOW has wanted to publish an article about public warehousing. The Editors would be happy to work with the American Warehousemen's Association on such a project. Reader Walters and others who have thoughts on the subject (pro or con) are invited to contribute.



FLOW

NOW...A 4000 LB. DOCKER!



Here, the new 4000 lb. capacity Docker, Model FFEH-40, demonstrates high stacking ... grocery warehouse



MODEL FFE-30
...3000 lbs. capacity
in paper warehouse



MODEL FFE-20
...2000 lbs. capacity
in dairy



MODEL FFE-15
...1500 lbs. capacity
in appliance warehouse

Automatic

Adds New Rear End Control Docker with 8-way Superiority Plus Higher Capacity

Here's a new, high quality piece of equipment, Model FFEH, designed specifically for operation where loads up to 4000 lbs., 48" long, must be handled in extremely close quarters. It needs only 81 1/4" plus load length for right angle stacking and operates easily in a 63" intersecting aisle. With 83" mast, lift is 130" with 62" of free lift...100" with a 68" mast. All standard attachments can be accommodated.

In addition, this Docker offers the same 8-point superiority characteristic of all Dockers: (1) faster lift and travel for higher productivity; (2) greater safety inherent in lower center of gravity and 4-wheel suspension; (3) shorter, more compact chassis for fast, efficient work in close quarters; (4) higher grade clearance increases operating range; (5) shorter turning radius improves maneuverability; (6) lower step height on rear end-control Docker enables operator to get on and off truck easily and safely; (7) heavy duty Class-H Silicone insulated motor permits substantial overload and higher starting torque with safety; (8) greater visibility when maneuvering. Capacity: 1500, 2000, 3000 and 4000 lbs.

No truck of the same type and capacity can match Docker performance on any job within its capacity. All models available on convenient lease or purchase plans. EXAMPLE: 1500 lb. Docker with battery and charger leases for as low as 92 cents per hour*. But, get all the facts. No obligation...just mail the coupon.

*Based on Model FFE-15 with battery and charger, working an 8-hour day, 240 days per year.

Automatic Electric Industrial Trucks Cost Less to Own...Less to Operate

AUTOMATIC TRANSPORTATION COMPANY

Division of The Yale & Towne Manufacturing Company
141 West 87th Street, Dept. B-8A, Chicago 20, Illinois

WORLD'S LARGEST EXCLUSIVE BUILDERS OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS



AUTOMATIC TRANSPORTATION COMPANY

Division of The Yale & Towne Manufacturing Company
141 West 87th Street, Dept. B-8A, Chicago 20, Illinois

- ☐ Rush complete information on Automatic DOCKER of ___ lbs. capacity.
☐ Full details on Lease and Budget-Purchase plans.

Name.....Title.....

Firm.....

Address.....

City & Zone.....State.....

Circle No. 115 on Reader Service Card

These Industry Leaders "CONTAINERIZE" Scrap, Waste & Rubbish AS IT ACCUMULATES...



Armour & Company
Douglas Aircraft Corp.
Dow Chemical
E. I. Du Pont
Ford Motor Company
General Electric Corp.
General Motors Corp.
Goodyear
Gulf Oil Company
Ingersoll-Rand Co.
Johns-Manville
Republic Steel
Reynolds Metals
Standard Oil Company
U. S. Gypsum
U. S. Rubber Company
U. S. Steel
Westinghouse

One-Man Dempster-Dumpster Cuts Costs

Enclosed, temporary storage of waste is the key to plant cleanliness and low-cost disposal. Big, clean Dempster-Dumpster Containers, placed at major inside and outside accumulation points, "Containerize" waste and rubbish as it generates. Costly rehandling is eliminated; one man and one truck-mounted Dempster-Dumpster dispose of all waste from your plant . . . picking up, hauling and dumping Containers on a planned shuttle schedule. You may own this low-investment System or your local Dempster-Dumpster Contract Hauler will furnish the Containers and empty them for a nominal fee.

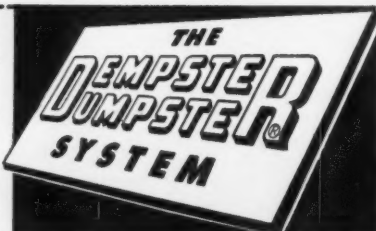
FREE BOOKLET "How to Cut Waste Disposal Costs"

Name of Dempster-Dumpster Contract Hauler furnished on request.

Dept. F-2 **DEMPSTER BROTHERS, Knoxville 17, Tenn.**

Dept. F-2, Dempster Brothers, Knoxville 17, Tenn.
Please send without obligation your new booklet,
"How to Cut Waste Disposal Costs."

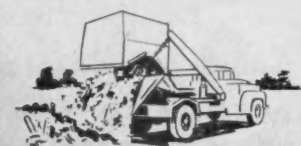
Name..... Title.....
Firm.....
Address.....
City..... State.....



CONTAINERIZED WASTE IS
PICKED UP . . .



HAULED . . .



. . . AND DUMPED

Circle No. 23 on Reader Service Card for more information

Industrial JIB CRANES

Feature Quality Construction

Head Assembly jig-welded for perfect alignment of entire jib.

Head Assembly pivots on heavy ball thrust bearing at top of column.

Head Assembly equipped with 4 large rollers, each containing 2 precision ball bearings. Rollers engage the surface of the vertical column.

All welded steel construction.

Special designs for larger capacities.

Jib girder made of high carbon steel.

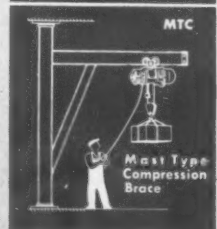
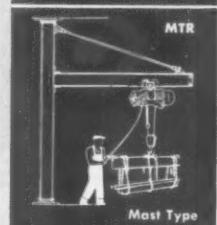
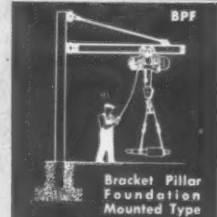
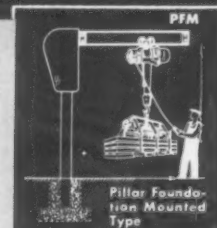
Spans to 20 feet in capacities to 6,000 lbs.
Spans to 14 feet in capacities to 12,000 lbs.

Pillar made of heavy seamless steel pipe.

Jib rotates in a complete circle in either direction.

Jib Crane is completely self-supporting.

Complete electrification available.



Industrial PBM Jib Cranes are ruggedly built for heavy duty service. Swinging in a complete circle these smooth operating cranes can efficiently serve several machines; freeing the heavy overhead cranes for many other important duties. Study the features of the Industrial PBM — the outstanding Jib Crane in Industry.

Industrial manufactures 6 other types of Jib and many models of Overhead Traveling Cranes to cover every need. Consult with Industrial for cranes to solve your material handling problems.

INDUSTRIAL CRANE & HOIST

Ingersoll PRODUCTS DIVISION
BORG-WARNER CORPORATION
GENERAL OFFICES
1830 SOUTH PAULINA STREET CHICAGO 5, ILLINOIS
DISTRICT OFFICES: NEWARK - DETROIT - ST. LOUIS -
ST. PAUL - BOSTON - PHOENIX - PITTSBURGH - RICHMOND -
SPRINGFIELD - WASHINGTON - WILMINGTON

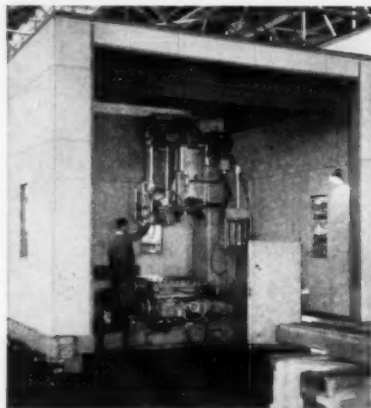


Circle No. 47 on Reader Service Card for more information

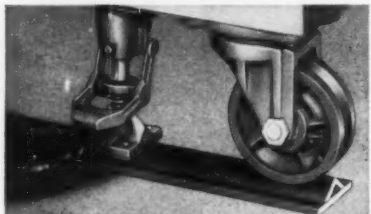
materials-handling news



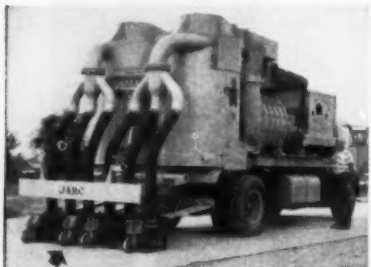
NEW AND UNUSUAL APPLICATIONS OF BASSICK CASTERS THAT MIGHT BE ADAPTED TO YOUR HANDLING PROBLEMS



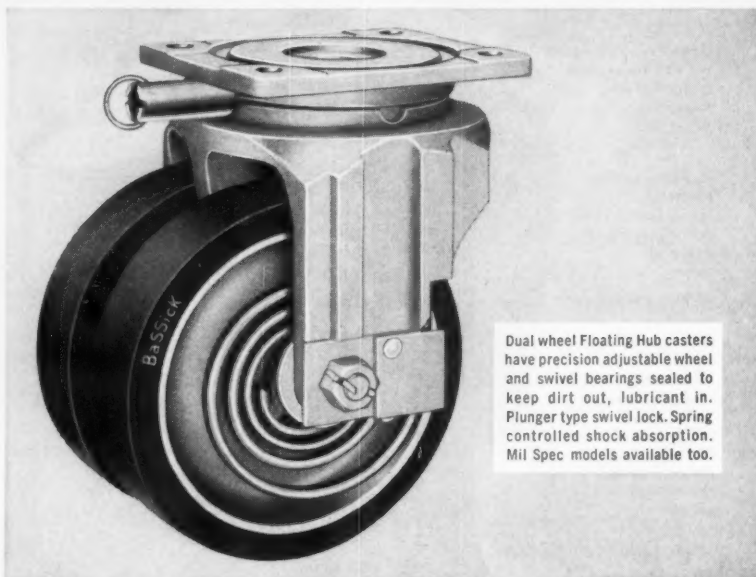
Rolling room steadies temperature!
Pratt & Whitney Co., Inc. has built constant temperature rooms on Bassick heavy duty "Floating Hub" casters for use in final finishing and testing of machinery. These mobile rooms seal off the machine being worked on against temperature changes which could cause errors in the extremely fine tolerances.



Bassick Grooved wheel casters have wheels that fit them for use on inverted angle iron tracks. They increase efficiency, and give better control of handling. Installations are economical on production, shipping, receiving, assembly lines and the like.



Big as 1500 home vacuums, the JARC® (Jet Aircraft Runway Cleaner) sucks up sand, rocks or hardware which could damage jet engines. Makers, United States Hoffman Machinery Corp., use rubber-tired, spring-loaded "Floating Hubs" to carry nozzles.



Dual wheel Floating Hub casters have precision adjustable wheel and swivel bearings sealed to keep dirt out, lubricant in. Plunger type swivel lock. Spring controlled shock absorption. Mil Spec models available too.

McDonnell Aircraft uses casters to aid production two ways:

First—Materials-handling

Bassick dual wheel Floating Hub casters on the McDonnell Aircraft Corporation J-57 jet engine build-up stands carry 6,100 pounds. As stands are pulled by tractors, the shock-absorbing casters snub out vibration dangerous to delicate engines.

When assembled the engines are transferred to run-in stands, (15,000 pound pay loads) towed to testing areas on Bassick casters, test run, and returned to assembly area for installation or storage. Smaller aircraft parts such as landing gear, radar assemblies, end wings, and stabilizers are also moved on Bassick caster-equipped stands.

Second—Man-handling

Bassick caster-equipped work stands are used to assemble the F-101 "Voodoo" for the U.S. Air Force at McDonnell Aircraft. They practically surround the plane, put the men in the most convenient work locations. Bassick position locks hold stands steady. Could you adapt this man-handling idea to production or maintenance jobs in your plant?



YOUR DISTRIBUTOR CAN HELP YOU — CALL HIM

Your local Bassick Distributor can keep you up to date on the latest wrinkles in time-saving materials-handling techniques. And he can often recommend the best, most efficient Bassick caster for a specific job. Let his knowledge and experience help you.



THE BASSICK COMPANY, Bridgeport 5, Conn. In Canada: Belleville, Ont. e. 1

**CAN YOU
AFFORD
NEEDLESS
HANDLING?**



the MARTIN-DECKER lift truck weight indicator



**LETS YOU KNOW
the weight of your load
AS YOU LIFT IT!**

**TWELVE MODELS TO CHOOSE FROM
2,000 LBS. TO 50,000 LBS. CAPACITIES**

- * FAST WEIGHT INVENTORY
- * MORE EFFICIENT WAREHOUSING
- * ELIMINATE WASTE MOTION
- * MORE SAFETY
- * PROLONG EQUIPMENT LIFE
- * AVOID OVERLOAD FINES
- * SAVE TIME & MONEY
- * MORE CONVENIENCE

It's no longer necessary to take the load to the scale...guess at weight or risk overload fines. Eliminate waste motion—lost time—wear and tear on equipment. Gain fast weight inventory, more efficient warehousing. Adopt this modern weighing method now for greater savings, convenience and safety!

FOR FURTHER INFORMATION WRITE TO
MARTIN-DECKER CORPORATION,
3431 CHERRY AVE.
LONG BEACH 7, CALIFORNIA, DEPT. N-26

MARTIN-DECKER CORP.
LONG BEACH, CALIFORNIA

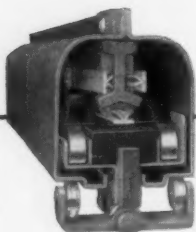
INDUSTRIAL WEIGHING, LOAD MEASUREMENT AND RECORDING INSTRUMENTS

Circle No. 148 on Reader Service Card for more information

4 EQUALLY GOOD REASONS



**...why your cranes and hoists
should be FEEDRAIL® powered**



Throughout industry, flexible Feedrail systems, in capacities from 60 to 500 amperes, provide convenient movable power sources for:

- Cranes and Hoists
- Production Lines
- Conveyor Assembly Lines
- Moving Test Lines
- Portable Tools
- Machine Tools
- Cutting and Sewing Rooms
- Lighting
- Motor Control

1. Safe electrification. Feedrail conductors are protectively enclosed in steel — no exposed wiring, no trailing cables. You enjoy maximum protection for personnel and equipment.

2. Minimum maintenance. Elimination of frayed, sagging, broken wires means safer, less frequent maintenance.

3. Better materials handling. There are no time consuming traffic holdups with Feedrail. Fewer accidents, less maintenance mean absolutely minimum down time — more efficient materials handling.

4. Lower operating costs. Elimination of hazardous, wasteful working conditions not only leads to better performance but improves safety records and plant morale as well — eventually lowers insurance costs too.

A Feedrail "moving power system" will fit your crane or hoist's needs — can be installed quickly and easily. Get full information. Write today to Dept. F-2.

SOLD BY MORE THAN 1,000 ELECTRICAL DISTRIBUTORS FROM COAST TO COAST
CH7

Never Becomes Obsolete
ELECTRIC FEEDRAIL® **FEEDRAIL CORPORATION**
Subsidiary of Russell & Stoll Company, Inc.
125 BARCLAY STREET • NEW YORK 7, N. Y.

SPECIALLY QUALIFIED REPRESENTATIVES IN PRINCIPAL CITIES
Circle No. 33 on Reader Service Card for more information

CALENDAR OF EVENTS

February 4-6

Annual Exhibit and Conference
Reinforced Plastics Division
The Society of the Plastics Industry,
Inc.
Edgewater Beach Hotel
Chicago, Ill.

February 3-14

Industrial Packaging
Short Course
Purdue University
Lafayette, Indiana

February 17-19

American Management Association
Mid-Winter Personnel Conference
Palmer House
Chicago, Ill.

March 11-12

Canadian National Packaging Conference
The Packaging Association of Canada
King Edward Hotel
Toronto, P.Q.

March 27-29

Electrical Maintenance Conference
The Electrical Maintenance Engineers Association of Southern California
Shrine Exposition Hall
Los Angeles, Calif.

April 15-17

Welding Show
The American Welding Society
Kiel Auditorium
St. Louis, Mo.

May 1-8

American Society of Tool Engineers
26th Annual Meeting and Tool Show
Convention Center
Philadelphia, Pennsylvania

May 7-17

United States World Trade Fair
New York Coliseum
New York, N. Y.

May 12-15

Canadian Warehousemen's Association
41st Annual Convention
Seignior Club
Montebello, Quebec

June 9-12

Material Handling Exposition
Cleveland Auditorium
Cleveland, Ohio

June 9-13

Fourth International Automation Exposition
New York Coliseum
New York, N. Y.



There's not a cent of capital tied up in this truck!

With the Clark Rental Plan you use modern, efficient materials handling equipment without a cent of investment of your working capital. The savings the equipment brings are usually greater than the rental rate.

Because of the modest cost, many companies use the Rental Plan for primary equipment needs. Others, faced with peak work loads or seasonal demands, use the Plan to supplement their regular fleet. Working capital is saved either way.

You can rent for a week or a year, depending on your need. You can adjust your rental period as your requirements change. Most important, you can have the necessary equipment *when you need it* to keep operating costs down. Complete details of the Clark Rental Plan are available on request. Write: Truck Rentals, Clark Equipment Co., Battle Creek, Michigan.

CLARK®
EQUIPMENT



Cut your costs with **ACME STEEL** Dexion Slotted Angle

the Idea framing material for all installations

Frame whatever plant equipment you may need, including electrical installations, more easily, quickly and at reduced costs with Acme Steel Dexion Slotted Angle.

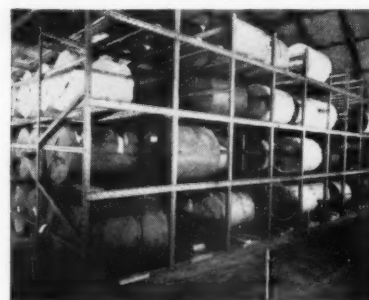
Dexion Slotted Angle measures, cuts and bolts together at the job site. Light and compact, Dexion Slotted Angle is packaged in 10-length units, complete with nuts and bolts.

For any kind of framing, Dexion Slotted Angle slot and hole patterns always match up, a special feature whether for custom building storage racks or hanging and installing electrical equipment. And strength factors allow stable, safe frameworks for holding hundreds of pounds. A wrench and the portable Dexion Cutter are the only tools needed. No drilling or welding . . . merely cut and bolt the pieces together to your exact specifications.

Cold-rolled, galvanized steel Dexion Slotted Angle is available in two sizes—standard and heavy duty. And it is completely reusable. A free Idea copy of the "Dexion Construction Guide" is yours for the asking. Just write Dept. FDD-28, Acme Steel Company, Chicago 27, Illinois.



ACME STEEL Dexion Slotted Angle frames tote pan rack for parts storage.



ACME STEEL Heavy-duty Dexion Slotted Angle racks weighty paper rolls.



ACME STEEL Dexion Slotted Angle used for stationary and mobile pallet racks.



DEXION SLOTTED ANGLE

Circle No. 1 on Reader Service Card for more information



food chain standardizes on **DISOWHEEL** for industrial trucks...

A large national food chain was having industrial truck problems in 11 warehouses. Steel wheels continually cracked concrete floors. Rubber tires "chunked out"—or "peeled" off their hubs and had to be replaced along with bearings—every 3 months.

When DISOWHEEL® was used—after 9 months of heavy duty—there was *no* damage to floors, *no* chunking out, *no* replacements, *no* downtime to change wheels. Result? DISOWHEEL is still in operation and this grocery chain has *standardized* on DISOWHEEL . . . uses it for over 300 of its trucks . . . demands DISOWHEEL for replacements, for new equipment—including trucks for use in warehouses under construction!

The secret of DISOWHEEL success is in the tire. Made of DISOGRIN®—a polyurethane elastomer "strong as steel, resilient as rubber"—this tire *outlasts* rubber and most synthetics 4 to 10 times; *won't* mar or damage floors; *resists* abrasion; *cuts* power consumption 35% or more; *boosts* load capacity as much as 4 times; *eliminates* expensive downtime due to frequent replacements; means *real savings* in your operation.

Available in all standard sizes, DISOWHEEL is now identified by the initial "D" stamped on every hub. It's the mark of leadership . . . your guarantee of quality. Be sure to look for it and—to keep your trucks rolling more profitably—specify DISOWHEEL every time!

ISOGRIN INDUSTRIES

510 SOUTH FULTON AVENUE, MOUNT VERNON, NEW YORK

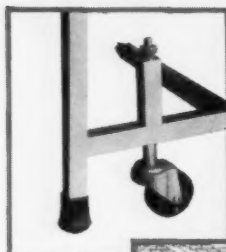
Offices: Los Angeles, Boston, Chicago, Detroit, Pittsburgh • Distributors everywhere

Circle No. 26 on Reader Service Card for more information

Work Safely

on

1 to 12 Step Ladder-Stands

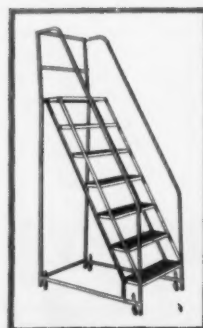
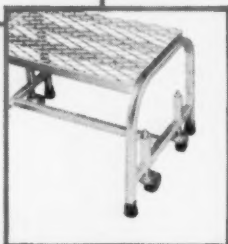


Roll Easily!

Special casters retract automatically under users weight — 9 steps and over feature foot activated front caster brake.

Sturdy!

SQUARE tubular steel frame. All-welded steel construction. Safe expanded metal treads.



Special taper lets you stand closer to your work. Entire unit finished with rust-resistant aluminum coating. FREE CATALOG!

ALUMINUM LADDER CO.

Dept. 7N
Worthington, Pa.

Circle 143 on Reader Service Card

NEWS AND NOTES

● OF PEOPLE AND EVENTS

DAY ELECTED CHAIRMAN OF THE COLLEGE-INDUSTRY COMMITTEE ON MATERIAL HANDLING EDUCATION

NEW YORK, N. Y.—Colonel John B. Day, head of the Material Handling Group in the School of



OUTGOING Chairman, Harold T. Amrine (left), welcoming Col. Day.

Industrial Engineering, Georgia Institute of Technology is the new chairman of Material Handling Institute's College-Industry Committee on Material Handling Education. Professor Amrine, outgoing chairman, remains on the

Committee as a college-representative member. CICMHE is composed of sixteen members. Eight from schools, four from manufacturers of material handling equipment and four are users. The three reappointed vice-chairmen are James R. Bright, Harvard University; D. H. Bitney, Union Steel Products Co.; and Norman B. Shikes, Radio Corporation of America. Bright represents colleges, Bitney represents the material handling equipment manufacturers and Shikes represents both the users and the AMHS. Past president of MHI, George G. Raymond, Jr., was elected to a four-year term as a representative of the material handling equipment manufacturers.

A new sales-service training school has been started by the Schield Bantam Co. for its distributor salesmen. It will permit them to become better acquainted with their company and also give them a better knowledge of the complete Schield Bantam line. Subjects included will be engineering and design features, product application, markets, selling aids and tools, and analysis of competitive equipment.

An unusual use for a Dillon Industrial Weight Indicator was discovered recently by the American Broadcasting Co. A fan of Art Baker's "You Asked For It" TV program wrote to Baker saying that she had heard of a man with fantastic strength. A man so strong that he could position himself between two automobiles and, by merely holding their bumpers, keep the autos from pulling away from one another. After a search, Baker's crew located the man, Jack Walsh, known as the Trenton

Strong Man. They had him perform his act in front of the ABC television cameras for use on a November show. A Dillon Weight



YOU ASKED FOR IT's Art Baker is shown holding the Dillon Scale.

Indicator was positioned so that it indicated the pulling power of the two automobiles trying to start off in different directions. The scale indicated that Walsh had successfully restrained 1700 pounds of force.

The Army has developed new techniques for loading and unloading aircraft for mass transportation of heavy construction equipment. A demonstration was held recently by the Corps of Engineers at McGuire Air Force

Introducing the New

GREEROLATOR



TOWMOTOR *GERLINGER*
THE ONE MAN GANG



HYSTER

MERCURY

TRACTOMOTIVE

Baker

YALE

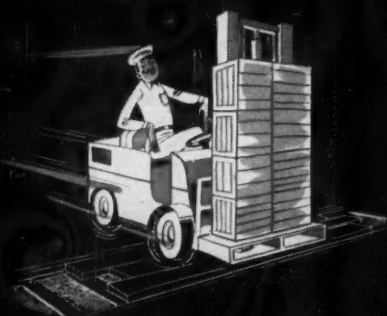
CLARK



Automatic

Pettibone Mulliken

ELPA



PROVED THE MOST EFFECTIVE SHOCK-ABSORBER FOR LIFT TRUCKS AND BUCKET LOADERS!

Be sure your vehicles
are equipped with
the new low-cost
GREEROLATER!

Here's Why:

**VEHICLE MAINTENANCE
REDUCED!**

**SMOOTHER, FASTER
OPERATION!**

**VEHICLE EFFICIENCY
INCREASED!**

U. S. Patents
under Other Licenses

Successfully Demonstrated to Leading Vehicle Manufacturers

In test after test, the GREEROLATER proved its tremendous ability to absorb shock and vibration under the most rugged operating conditions. In each test, fully loaded lift trucks and bucket loaders maneuvered over the roughest ground at top speed. The characteristic bounce and jounce set up by the moving load was visibly reduced to a slight floating action. You could actually see and feel the difference!

By reducing shock to cylinders, hose, packings and other major parts, the GREEROLATER sharply cuts replacements and maintenance costs! Heavier and larger loads can now be carried faster... and more safely! Drivers, free from the tiring effects of vibrations, work better! In every way, a low cost GREEROLATER installed on your equipment usually means increased production with greater profits for you on every job.

ASK YOUR DEALER FOR A DEMONSTRATION!

OR WRITE GREER HYDRAULICS INC. • NEW YORK INTERNATIONAL AIRPORT • JAMAICA 30, NEW YORK

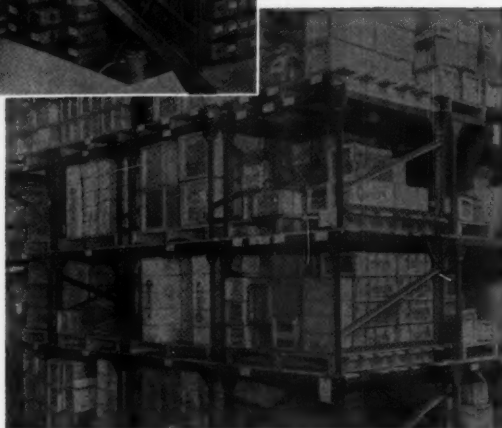


PLANNED STORAGE ... ASSURES MINIMUM SPACE AND HANDLING TIME



Steel catwalks on F-G-M long span Bulk Storage Racks utilize space up to the ceiling.

F-G-M Pallet Frames permit stacking on pallets of loose, irregular or crushable loads with full access to materials stored at all times.

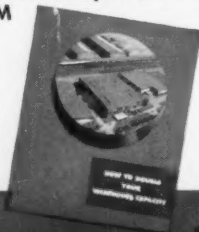


Dimensions, weights, physical properties, volume and turnover of material into and out of your plant form a highly individual distribution pattern. To assure maximum efficiency in handling and storage, investigate F-G-M Planned Storage.

Time-proved F-G-M systems require minimum floor space, minimum manpower, cut factory costs. An F-G-M survey is yours for the asking.



Send today for your free copy of Bulletin No. 700-A on how to double your storage capacity. The Frick-Gallagher Mfg. Co., 105 S. Michigan Ave., Wellston, Ohio.



FRICK-GALLAGHER

BONDERIZED

**STEEL EQUIPMENT
FOR EVERY STORAGE NEED**

ROTABINS	STEEL SHELVING	WAREHOUSE RACKS	COUNTERS	SPECIALTIES

Circle No. 36 on Reader Service Card for more information

NEWS AND NOTES

Continued

Base near Trenton, N. J. The techniques will increase the air-lift tonnage by 50 percent. They will also enable the movement of an entire Engineer unit with its standard equipment into a distant area to perform general type, road, airfield and bridge construction in the event of military or civilian emergencies. The Air Force participated in the demonstration, which included the loading and unloading of Engineer equipment with various aircraft; assembly of a 20-ton crane; disassembly of construction machines for air movement; making composite loads, such as tractor-scraper combinations; and the loading of construction machines.

Registration is being conducted now for the seventh annual Package Design Seminar of New York University's Division of General Education. The course will be presented on 14 consecutive Wednesday evenings, beginning February 5, at the Washington Square Center of NYU. It is to be directed by Robert I. Goldberg, New York packaging design consultant, educator and director of Associated Industrial Designers. According to Mr. Goldberg, the current series is planned as "a comprehensive packaging and marketing seminar for business executives, purchasing agents, packaging suppliers, advertising agency personnel and designers." Registration information may be obtained by writing the Division of General Education, New York University, 1 Washington Square North, N. Y., N. Y.

Establishment of a consulting business in the field of Industrial Engineering and Management has been announced by James M. Apple, former professor of Industrial Engineering at Michigan State University. Mr.

FIFTY STANDARD MODELS AVAILABLE



LOW LIFT PLATFORM TRANSPORTERS

...Models WWY-4 & WNY-4...Capacities 4000 lbs. Models WWY-6 and WNY-6... Capacities 6000 lbs. Available with wide or narrow battery compartment.

Automatic Transporters Most Complete, Most Versatile Line of Operator-Led Electrically-Driven Trucks on the Market

These compact, easy-to-handle trucks perform all functions of standard rider-type trucks, yet cost considerably less. They are highly maneuverable...steering handle can be turned up to 200° for maneuvering in tight quarters. Light in weight...Transporters can enter trailers and operate on floors or in elevators considered unsafe for heavier equipment...can be used with all standard attachments. Shown here are only a few of the models available.

Convenient lease and budget purchase plans available on all Transporters. EXAMPLE: 4000 lb. Platform Transporter can be leased with charger and battery for as low as an average cost of 27 cents* per hour. Mail the coupon for complete information.

*Based on Model WW with battery and charger, working an 8-hour day, 255 days per year.

The only line of operator-led industrial trucks with Class-H Silicone insulated motors available in all models...

PLATFORM STACKER

...Model WLT...with 83" mast, lifts 132"...Capacities 4000 to 5000 lbs. in telescopic type, 6000 lbs. only in non-telescopic.

TRANSPORTER TRACTOR

...Models WT-2A, WT-4A, WT-2B & WT-4BS... Capacities ranging from 200 lbs. normal to 1000 lbs. maximum draw-bar pull.

STRADDLE-TYPE STACKERS

...Model WAT...Capacities, Standard models, 4000 lbs. in telescopic type, 6000 lbs. in non-telescopic.

PALLET MODEL TRANSPORTERS

...Model WPY-4...Capacity 4000 lbs. Model WPY-6... Capacity 6000 lbs. Available with wide or narrow battery compartment.

FORK-LIFT STACKER

lifts higher than any other stacker of its type...with 83" mast, lifts 135"...Capacities 1000, 1500, 2000, 2500, 3000 and 4000 lbs.

Automatic Electric Industrial Trucks Cost Less to Own...Less to Operate

AUTOMATIC TRANSPORTATION COMPANY

Division of The Yale & Towne Manufacturing Company
141 West 87th Street, Dept. B8, Chicago 20, Illinois

WORLD'S LARGEST EXCLUSIVE BUILDERS OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS



AUTOMATIC TRANSPORTATION COMPANY

Division of The Yale & Towne Manufacturing Company
141 West 87th Street, Dept. B8, Chicago 20, Illinois

☐ Please rush me complete information on Automatic Electric Transporters.

Your Name.....Title.....

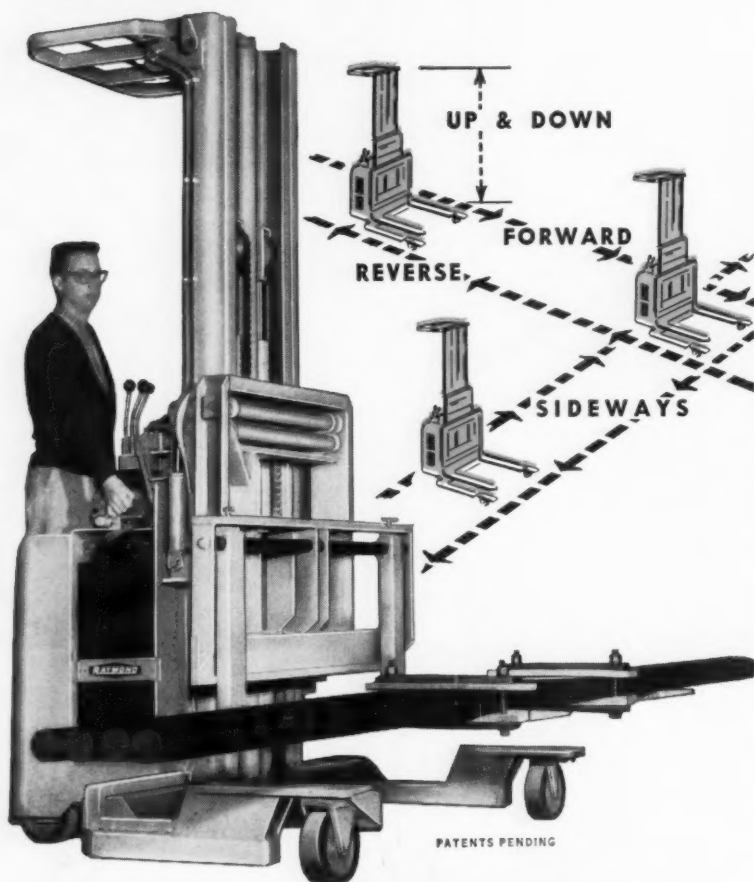
Firm.....

Address.....

City & Zone.....State.....

Circle No. 116 on Reader Service Card

4-D ELECTRIC TRUCK



PATENTS PENDING

move LONG material in NARROW aisles

Bar stock, rods, sheet steel, pipe, tubing, assemblies, carpeting, or any long material is easily handled by the Raymond 4-D Electric Truck . . . up or down . . . forwards . . . backwards . . . or sideways down a narrow aisle. You have to see it to believe it.

**MAIL
COUPON
TODAY**

The RAYMOND CORPORATION

3350 Madison St., Greene, N.Y.

Please send Bulletin describing your amazing 4-D Electric Truck

NAME _____	TITLE _____
COMPANY _____	
STREET _____	
CITY _____	STATE _____

Circle No. 121 on Reader Service Card for more information

NEWS AND NOTES

Continued

Apple has been at Michigan State University since 1947 and was in charge of the industrial engineering program. He is the author of the book, "Plant Layout and Materials Handling", and has written other books on the subject.

C. H. Wolf, an engineer with The Dow Chemical Co., has been named vice chairman of the Navy Industrial Material Handling Board. Wolf received the appointment through his association with National Security Industrial Association whose membership is made up of 500 U. S. companies including Dow. The NSIA acts in an advisory and liaison capacity between the Defense Department and industry. The NIMHB was set up at the request of the Navy to improve material handling at Navy installations where such programs are now in effect. The committee will assist in an initial study which will compare the present methods of naval material handling with successful operations in industries of a similar size and function.



C. H. Wolf

Two staff members have been appointed to the National Safe Transit Committee. William M. Wilkinson who will aid in the coordination of the Washington office's administrative affairs and supplement its public relations activities with industry and Mrs. Louise T. Varn who will assist him.

PORTLAND, ME.

J. W. Wiltsie, Jr., of the James-Wiltsie Co., Portland, Me. has been named sales and service

representative in upper New England for the **Towmotor-Gerlinger** line of fork lift trucks, material carriers and industrial tractors.

SKOKIE, ILL.

Edward J. Campbell has been appointed to the position of sales engineer in the Minnesota-Iowa area for **K-W Battery Co.**

CHICAGO, ILL.

Erlinder Equipment Corp., Chicago, Ill., has been appointed Chicago-area distributor by **Daybrook Hydraulic Division**, **L. A. Young Spring & Wire Corp.**

CLIFTON, N. J.

Richardson Scale Co. has appointed **R. W. Bagnell** as their district manager for the New York-New Jersey area.

CHICAGO, ILL.

The appointment of **C. W. Hanna** as the Chicago Regional Manager of the Industrial Division has been announced by **Gould-National Batteries, Inc.**

CLEVELAND, OHIO

Republic Steel Corp., has appointed **Bode Finn Co.**, Cincinnati and Columbus, Ohio, to handle the sale and distribution of Republic material handling equipment.

TOLEDO, OHIO

Construction Machinery & Supply Co., Inc., Toledo, Ohio, has been named by **Koehring**, division of **Koehring Co.**, to sell its "Heavy-Duty" construction equipment.

NEW YORK, N. Y.

Lamson Corp. has appointed **Robert C. Long** as their New York Regional Manager. He will be responsible for the sales and engineering of Lamson Systems in the New York, Philadelphia and

RAYMOND

PALLET HANDLING TRUCKS

For handling or stacking pallet loads
... specify RAYMOND

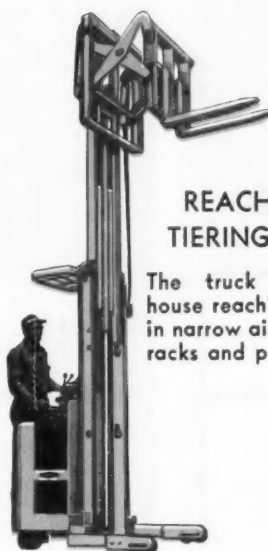
STRADDLE TYPE TIERING TRUCK

Raymond made the 6 foot aisle possible! Tier pallet loads with ease . . . increase warehouse capacity 50%.



REACH-FORK[®] TIERING TRUCK

The truck with "boarding house reach"! Easily operates in narrow aisles using existing racks and pallets.



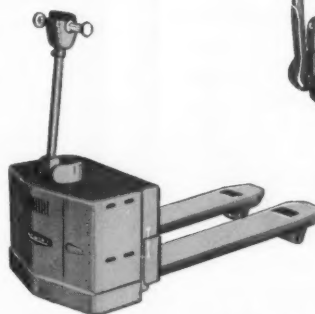
Lightweight HAND PALLET TRUCK

Most widely-used hand pallet truck in America! Lightweight . . . easy to maneuver . . . hydraulic lift and lower.



ELECTRIC PALLET TRUCK

Romps up ramps. Battery powered truck for continual pallet handling . . . does the work of 3 hand trucks.



Send for Details

The RAYMOND CORPORATION

3353 Madison Street, Greene, N. Y.

Send FREE RAYMOND Bulletins:

- ☐ Lightweight Hand Pallet Truck
- ☐ Electric Pallet Truck
- ☐ Straddle Type Tiering Truck
- ☐ Reach-Fork Tiering Truck

NAME	TITLE
COMPANY	
STREET	
CITY	STATE

Circle No. 122 on Reader Service Card for more information

One **PAYLOADER®** tractor-shovel



with a Bucket...

The model HA "PAYLOADER" has been the pioneer and standard of the tractor-shovel industry for both indoor and outdoor bulk-materials handling since first introduced in 1946. Today's model HA still leads the field in output capacity and proven reliability for its size... does 50 to 100% more work unloading boxcars and on stockpile jobs than older-style machines, according to actual user reports.

But the new model HA is more than an outstanding bulk-materials handler because of the many attachments that are available for interchange with its bucket in a few minutes time... attachments that adapt it quickly to many other duties.

Features of the model HA that enable it to dig more, carry more and deliver more include exclusive standard hydraulic load-shock-absorber, 40 degree bucket tip-back at ground level and 2,000 lb. carry capacity. There is a nearby Hough Distributor ready to demonstrate it on your work.



Modern Materials Handling Equipment

THE FRANK G. HOUGH CO.

LIBERTYVILLE, ILLINOIS
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY
731 Sunnyside Ave.



2-A-3A

Circle 123 on Reader Service Card for more information
26



with a Scrap Grab...

Substitute this hydraulic grapple fork for the "PAYLOADER" bucket when you have tangled light-metal scrap to wrestle, or bales, bundles and similar loads to pick-up, transport and load, dump or pile. The two upper grab arms with individual hydraulic rams firmly grip and hold loose pieces—like your own arms carrying a bundle of firewood.

To pile or stack, the bottom forks raise up to 6¾ feet high, and can be hydraulically tilted up or down as necessary. A separate hydraulic-powered kick-out arm is an integral part of the attachment to insure positive and full unloading of tangled materials.

Carry capacity of the model HA with this grapple is 1,500 lbs. For higher lifts (up to 9'10") and greater carry capacity (2,250 lbs.) the next larger "PAYLOADER" (model HAH) can be supplied.



Modern Materials Handling Equipment

THE FRANK G. HOUGH CO.

LIBERTYVILLE, ILLINOIS
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY
731 Sunnyside Ave.



2-A-3B

Circle 124 on Reader Service Card for more information
FLOW

can handle many different jobs



with a Sweeper...

This Pick-up Sweeper attachment is so designed that it can be put on or removed from the bucket of the model HA "PAYLOADER" in a few minutes. It sweeps a 4-foot-wide path—collects the sweepings in the bucket, which will raise and dump its accumulated loads into a bin or box wherever desired. The rotary broom is powered by an hydraulic motor with pressure from the "PAYLOADER" hydraulic system. Broom speed can be varied independently of the travel speed.

A large area of aisle, floor, driveway or parking lot can be swept in a short time with this attachment. Many plants mount it on the "PAYLOADER" bucket after the regular day shift and do their sweeping at night.

In these days of increasing competition a multiple-use machine like the model HA that can be kept busy more hours on more shifts helps hold down both capital investment and operating costs.



Modern Materials Handling Equipment

THE FRANK G. HOUGH CO.

LIBERTYVILLE, ILLINOIS
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY

731 Sunnyside Ave.



2-A-3C

Circle 125 on Reader Service Card for more information
FEBRUARY, 1958



with a Payhopper

A revolutionary new use for the model HA "PAYLOADER" is created with this new idea—buckets-on-casters, called "PAYHOPPERS" that the "PAYLOADER" operator can hitch and unhitch instantly without leaving his seat.

One "PAYLOADER" can serve many such "PAYHOPPER" units spotted in the plant at stamping presses, screw machines, etc., to receive scrap or product—and then lift, carry and dump the "PAYHOPPERS" wherever desired.

For Your Convenience...



Now your Hough Distributor has at his disposal the broadest and most complete set of financing

plans ever offered:—

TIME PAYMENT . . . LEASING PLANS,*

with or without OPTION TO PURCHASE—

any and all kinds of financing to best fit your needs for the purchase of "PAYLOADER" equipment. See him today!

* (Available in Continental U.S.A.)

731 Sunnyside, Libertyville, Ill.

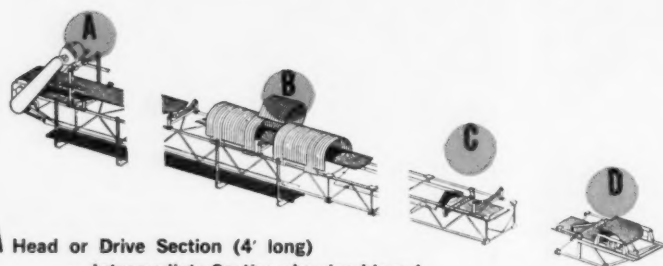
2-A-3D

Circle 126 on Reader Service Card for more information

NEW IDEA

in prefabricated
belt conveyors

JOY READY-SPAN tubular design
requires no special engineering



A Head or Drive Section (4' long)

B Intermediate Section showing hinged cover (20' - 8' - 4')

C Intermediate Section showing optional return belt cover

D Tail section showing takeup and belt plow (4' long)

Just tell us the length, the speed, and the material you want to move and we can pull a Ready-Span prefabricated conveyor "off the shelf" for you. You'll get all the economies of pre-engineering plus all the advantages of a conveyor installation tailored to your needs.

Here's how it works: each section, including drive and tail terminals, is made up of four pipes connected by pipe diagonals forming a lace framed truss. Sections bolt together to form a straight, rigid, pipe frame truss.

All accessories—idlers, walkways, cover decking, hoods and supports clamp to the pipe anywhere you wish—without burning holes or using pre-arranged multiple holes that weaken the conveyor.

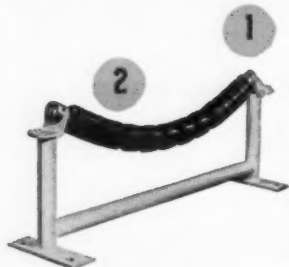
The Joy Ready-span is available in a variety of drive and take-up combinations for any standard belt width. Promptly available from stock to meet almost any handling condition.

Write for Bulletin 218-42

NEW IDEA

in conveyor belt idlers

JOY LIMBEROLLER



Write for Free
Bulletin 218-42A

Radically different from all other idlers, the Limberoller is a single roll idler consisting of neoprene discs molded to a flexible steel cable. The entire idler turns on its own axis.

(1) Only two bearings are used, one at either end, up out of the dirt. (2) The idler supports the belt across its entire width... eliminates gaps left by ordinary 3-roll idler. This even support, combined with cushioning "no-bump" action of neoprene discs, can increase belt life 6 times and more. The Limberoller can be installed on any belt conveyor, even on existing conveyors.

WSW L0967-218

JOY

Manufacturing Company, Oliver Building, Pittsburgh 22, Pa.

In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario.

Circle 51 on Reader Service Card for more information

NEWS

AND NOTES

OF PEOPLE AND EVENTS

Continued

Baltimore districts. Long is a graduate of Syracuse University where he majored in mechanical engineering. He is also a Registered Professional Engineer in New York State.

BOSTON, MASS.

Magline Inc., has appointed **A. D. Bowman Associates**, of Boston, factory representatives for Maine, Vermont, New Hampshire and northeastern Massachusetts, including the greater Boston area. The line will consist of dock boards, loading ramps and other magnesium material handling equipment.

DETROIT, MICH.

George A. Delbos has been named to head The Packaged Electric Power Co., the new Michigan office of **C & D Batteries, Inc.**

CHICAGO, ILL.

The Industrial Division of **Gould-National Batteries, Inc.** has appointed **F. B. Steele** as District Manager of their Chicago sales office.

CLEVELAND, OHIO

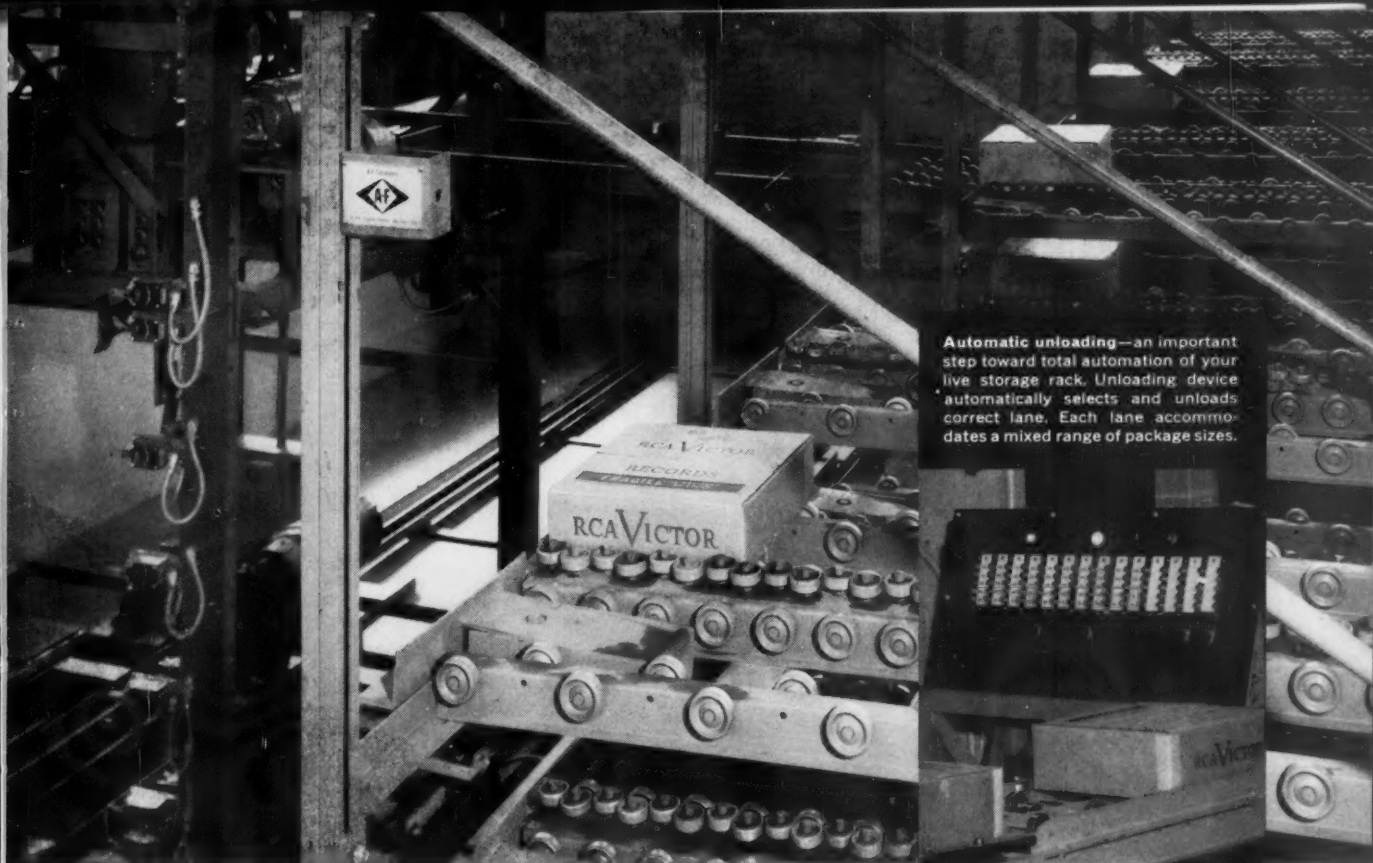
Edwin A. Dippe, is now manager of production planning at the Axle Division of **Eaton Mfg. Co.**

LITTLE ROCK, ARK.

Troy Burns Co. has moved to 3015 Lewis St., Little Rock, Ark. In their new location, they will have over 5000 square feet of office, warehouse and shop area.

CHICAGO, ILLINOIS

Thornel Associates has been appointed representatives for equipment and accessories manufactured by **Tote System, Inc.**



Automatic unloading—an important step toward total automation of your live storage rack. Unloading device automatically selects and unloads correct lane. Each lane accommodates a mixed range of package sizes.

Push buttons actuate removal from storage. Same operation can be accomplished by tape or card control, if desired.

A-F LIVE STORAGE RACKS

Totally automatic...or "push button"...or as much automation as you can profitably use

Your AF Live Storage Rack *can be* totally automatic—even to the point where packages actually dictate their own route and "find" their own storage—then unload themselves after a specified period of time, as needed. The rack shown is unloaded by push-button remote control. One man (or woman) removes items from storage without moving from the control console. This same operation can be actuated by tape or card control if desired.

Perhaps your plant is ready for this kind of automation—or perhaps it's still a few years away. The important point is that when you invest in your live storage rack, you have purchased the basic element for your future automatic warehouse. It will give you great benefits today—whether loaded and un-

loaded by hand, by lift truck, or by other mechanical devices. Then, at a later date, it can be converted—simply by adding automatic loading and/or unloading devices.

Whatever degree of automation you specify, the fundamental advantages of live storage will be yours from the outset—orderly storage, elimination of needless walking and confusion, fool-proof first-in first-out control, space saving and many other benefits.

Our engineers will gladly survey your present storage facilities, make suggestions on cost-saving improvements and submit a proposal. In addition, we will help you determine just how automatic your system should be—for maximum benefit to you today and tomorrow. Write today for complete details.

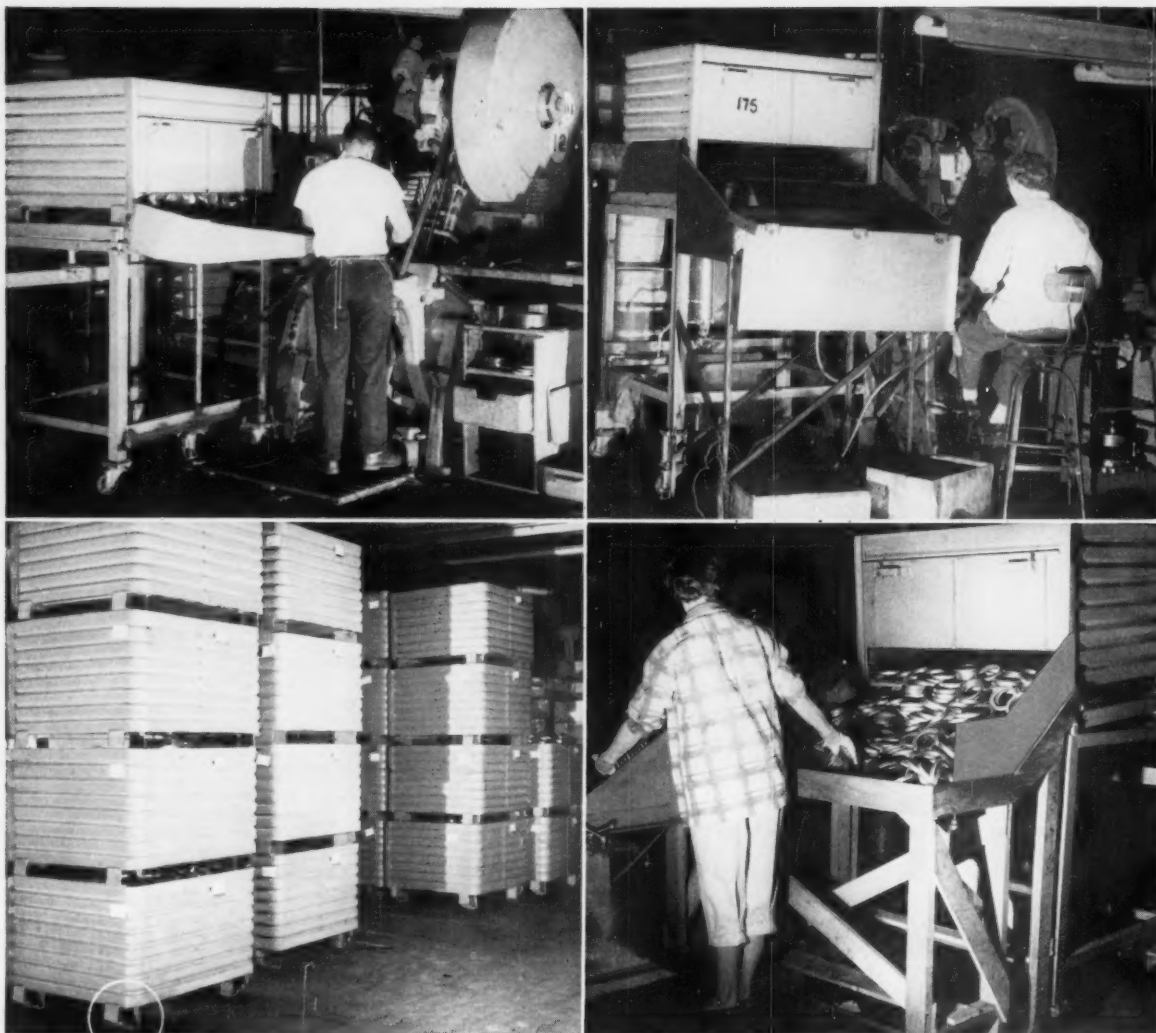


A-F founded the package conveyor business in 1901

A-F Conveyors

Custom Engineered Conveyor Systems
Packaged Conveyors—Wheel, Roller, Belt, Trolley
Pan and Rack Washers
Metal Cleaning and Processing Equipment

The Alvey-Ferguson Company, Dept. UD-2, Cincinnati 9, Ohio



Photos through courtesy of Federal-Mogul-Bower Bearings, Inc.

Powell Dual-Purpose Flow-Matic® System steps up production and reduces maintenance for the Redwood City, Calif. plant of National Seal Division of Federal-Mogul-Bower Bearings, Inc., while going through major changeover.

Powell developed a special Flow-matic® box to meet unusual interim circumstances at National. Because National ultimately desired a complete Flow-matic® system, yet had to have the new system interchange with the old during conversion, Powell engineers developed a special foot and corner bracing to enable Flow-matic® units to interchange with those of the older style (*note circle above). The conversion program is still going on, and without a hitch.

Here's another example of Powell material handling know-how and the versatility of their great new Flow-matic® system, proved the finest method yet devised for volume handling.

*Patent: No. 2762529

© T.M. registered
by The Powell
Pressed Steel Co.

15-A



POWELL flow-matic®
— SYSTEMS —

The Powell Pressed Steel Co. Dept. 228 Hubbard, Ohio

Circle No. 142 on Reader Service Card for more information

LAMSON

pioneers the conquest
OF INNER SPACE

MECHANIZED MOTION

speeds in-plant movement, cuts production costs

Jets, rockets and Sputniks are beyond our ken. But we *have* learned a lot about the conquest of *inner* space—the space through which your materials and products move. And we know that the more you mechanize this movement, the more you cut production costs.

Lamson offers a complete, modern, fully integrated package conveyor system for every kind of material handling. Our Automatic Palletizers will handle up to 2400 cartons per hour. And Lamson Pneumatic Airtube Systems give fast, sure in-plant movement of correspondence, punch cards, drawings, samples, tools and small parts. We guarantee the performance of our systems. We engineer, build, and install them—no split responsibility.

The Lamson field engineer in your area would be pleased to study your operation — to prove Lamson pioneers the conquest of inner space.



LAMSON CORPORATION • 205 Lamson Street, Syracuse 1, N. Y.

Plants in Syracuse and San Francisco Offices in All Principal Cities

Manufacturers of Pneumatic Airtube® Systems • Integrated Conveying Systems • Pallet Loaders • Selective Vertical Conveyors • Bookveyors® • Clinical History Lifts • Trayveyors® • Food Service Systems • Blowers and Exhausters • Exidust® Central Vacuum Cleaning Systems • Dryset® Air Vacuum Systems • Mobilift® Industrial Trucks

*Trade Name

Circle No. 134 on Reader Service Card for more information

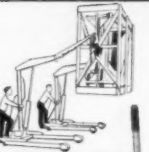
FEBRUARY, 1958

31

SPECIFY **RUGER** CRANES

**FOR
LIFTING
POWER**

where and
when you
need it!



THE CRANE WITH
1000 US
capacities $\frac{1}{4}$ to 3 ton

For versatile lifting power, specify RUGER Hydraulic Cranes. Here's a mobile crane that reaches in-under-over ... unloads trucks ... lifts motors, machinery and crates ... lays pipe ... tilts drums ... mates dies ... combines all your lifting and transporting problems into one operation. Variable speed hydraulic control is featured on both manual and electric models. The RUGER line provides maximum safety and adaptability. Models available are floor ... truck ... convertible floor and truck ... short mast ... high mast ... wide base ... adjustable legs and retractable outrigger for side lifting. Send today for descriptive literature.

RUGER



RUGER EQUIPMENT, INC.
601 West Fourth Street
Uhrichville, Ohio



Circle 85 on Reader Service Card for more information
32



Sweeping Dividends WITH THE NATION'S No. 1 INDUSTRIAL HOUSEKEEPER

BEFORE YOU BUY ANOTHER BROOM
FOR YOUR PLANT—LET US PROVE TO YOU
WITH A FREE DEMONSTRATION THAT

1. A power sweeper will reduce your plant sweeping costs 80%—paying for itself many times over.
2. A Wilshire Power Sweeper will out-perform any sweeper on the market.
3. Wilshire's nation-wide distributor organization provides you with the service when you need it!



FREE Bulletin D-58 tells all!

Please give me full information
on your FREE No Obligation
Demonstration Plan! And send
descriptive literature.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____



Wilshire
Power Sweeper Company

ELGIN, ILLINOIS • GLENDALE 4, CALIFORNIA

DISTRIBUTORS IN ALL PARTS OF THE U.S.A.
FOR CANADA: Plant Maintenance Equipment Ltd.,
Vancouver, Montreal, Toronto
FOR EXPORT: The HOMS Company, 44 Whitehall St.,
New York 4, N. Y.

Circle 150 on Reader Service Card for more information
FLOW

BIG JOE®



BIG JOE

MANUFACTURING COMPANY

Wisconsin Dells, Wisconsin

Circle No. 499 on Reader Service Card for more information

FEBRUARY, 1958



CATALOGS

offered in

Industrial Casters . . .

Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are said to provide the solution. Albion casters are available in every range of industrial size, type, capacity and desired wheel type to suit your needs. A caster and wheel catalog is yours for the asking from Albion Industries, Inc.

Circle 7 on Reader Service Card

Semi-Automatic Strapping Machine. . .

applies as many steel straps as desired in a matter of seconds with uniform, pre-determined tension. Electrically powered, the machine is controlled by push-buttons. Strap is cut automatically, and ends are instantly and permanently joined by spot welds. Further information is available from Acme Steel Products Div., Acme Steel Co.

Circle 2 on Reader Service Card

Dual Wheel Floating Hub Casters . . .

used by one firm carry 6100 pounds and their shock-absorbing qualities eliminate vibration dangerous to delicate engines. These casters have precision adjustable wheel and swivel bearings sealed to keep out dirt and lubricant in. Plunge type swivel lock. Full details on their complete line of casters is offered you by The Bassick Co.

Circle 8 on Reader Service Card

If You Want to Fasten . . .

corrugated board, cartons, fabric, leather, plastic bags, wood, roofing, rubber or light metals, then you'll be interested in the booklets on each of these items offered you by Bostitch, Inc.

Circle 88 on Reader Service Card

Safety Hooks for Hoists. . .

Each of these hooks is machined especially to suit each user's equipment. The safety gates act as danger indicators as they permit quick detection of sprung hooks. The gates swing closed and automatically lock. To open, it's only necessary to push the non-jamming release button. A safety hook data sheet is offered you by the E. D. Bullard Co.

Circle 90 on Reader Service Card

Steel Strapping Tools and Accessories. . .

Brainard have warehouses strategically placed throughout the U. S. and Canada to insure quick delivery of tensional and heavy duty strapping as well as tools and other strapping supplies. They also offer stretching and cutting power tools and a complete line of quality strapping. Further information about their complete line is yours for the asking from Brainard Steel Div., Sharon Steel Corp.

Circle 155 on Reader Service Card

Lever Dollies . . .

equipped with either rubber or metal wheels and in capacities ranging from 3000 pounds to 5250 pounds are described in literature offered you by BECO.

Circle 86 on Reader Service Card

More Power and Life per Dollar . . .

is the claim made by the Edide-Industrial Div., Electric Storage Battery Co. for their industrial batteries. A detailed bulletin is available which gives the complete story.

Circle 30 on Reader Service Card

All Four Basic Styles of Conveyor Belting . . .

spiral woven friction drive, spiral woven chain drive, flat wire fraction or

sprocket drive, and flex-grid are available from Cyclone in a wide variety of sizes, meshes, weaves and steel analyzers. Full details are available from Cyclone Fence Department, American Steel & Wire Div., U. S. Steel Corp.

Circle 91 on Reader Service Card

Four Fabric Constructions . . .

of wire rope slings are available from Wickwire Spencer Steel Div., The Colorado Fuel and Iron Corp. They are—single part wire rope construction, flat braided six part wire rope construction, round braided eight part wire rope construction and cable laid construction. All Wickwire Certified Slings are proof-tested to loads equal to twice their rated capacity. Complete details are available from the company.

Circle 20 on Reader Service Card

Convert Your Hand Pushed Hoists and Cranes. . .

Eliminate slow pulling and pushing drudgery. Speed up handling, save time and increase production. Simply attach a Trojan Tractor to convert to power operated type. Full details are given in Bulletin 833 offered you by Detroit Hoist & Machine Co.

Circle 24 on Reader Service Card

Automatic Loading Platforms . . .

The Load-O-Matic Bulletin published by Field Engineering Products Co. describes the completely sealed hydraulic mechanism in their standard self leveling units on loading docks or ground level.

Circle 34 on Reader Service Card

Casters and Wheels . . .

These casters and wheels are rust-proofed by zinc plating. All swivel and wheel bearings are factory

and BULLETINS

advertisements in this publication

packed with a high quality grease and Zerk fittings are provided for quick grease-gun lubrication. Also, string guards assure easy rolling at all times. Further information is available from Darnell Corp., Ltd.

Circle 21 on Reader Service Card

Electric Dock Truck . . .

The Cargo Scout is claimed to have the fastest travel speed and the fastest lift speed of any model in its class. Fast acceleration, 360-degree turning and ease of operator mounting and dismounting are a few of its time-saving features. Full information is available in a booklet offered you by The Elwell-Parker Electric Co.

Circle 28 on Reader Service Card

Air Powered Hoist Trolley . . .

connects to any beam hoist by a drawbar and rides the same beam as the hoist. Enables one-handed operation to raise, lower and move loads up to two tons. Speed varies from a slow creep to 70 ft. per min. Bulletin 87-1 gives the complete story and is offered by Keller Tool Div., Gardner-Denver Co.

Circle 120 on Reader Service Card

Industrial Trucks and Trailers . . .

for conveyor operation, tractor-pull operation and manual operation are described in literature available from Jakes Foundry Co.

Circle 49 on Reader Service Card

Time and Motion Studies Have Proved . . .

that the Plantman Sweeper cuts floor cleaning costs, so states the manufacturer, Handling Devices Co., Inc., Sweeper Div. It is gas powered and is said to be up to 16 times

faster than push-broom cleaning. A free floor cleaning planning guide and complete details are offered.

Circle 43 on Reader Service Card

The Hydroelectric Tractor . . .

hauls one or more units with speed, safety and ease of operation. The Dyna-Dual Power Unit provides enough power to pull loads of 6000 pounds or more at low cost. Bulletin KT gives the details and is offered you by Lift Trucks, Inc.

Circle 57 on Reader Service Card

Industrial Trucks and Trailers . . .

in various sizes and capacities both standard and specially-designed units for long service are described in literature available from The Ohio Galvanizing Co.

Circle 77 on Reader Service Card

Solid Rubber Tires . . .

with E-Z rolling tread are discussed in a folder offered by Phoenix Mfg. Co. Special treads such as hard rubber, static conducting and oil resisting are also available.

Circle 79 on Reader Service Card

Long Material . . .

such as bar stock, rods, sheet steel, pipe, carpeting is easily handled in narrow aisles by the Raymond 4-D Electric Truck. A bulletin on the 4-D Truck is offered by The Raymond Corp.

Circle 121 on Reader Service Card

Mobile Hydraulic Crane . . .

unloads trucks, lifts motors, machinery and crates, lays pipe, tilts drums and mates dies. Models available are floor, truck, convertible floor and truck, short

mast, high mast, wide base, adjustable legs and retractable outrigger for side lifting. Descriptive literature is offered by Ruge Equipment, Inc.

Circle 85 on Reader Service Card

Wire Rope Slings . . .

Roebbling slings are said to embody advanced construction features that certify safe, steady service and stability under load. Full information on slings and fittings is given in the sling book offered by the Wire Rope Div., John A. Roebbling's Sons Corp.

Circle 82 on Reader Service Card

To Find Out How . . .

you can process work in motion, cut down idle time, and assure safe handling of your product, The American MonoRail Co. is offering literature on their method of overhead handling.

Circle 4 on Reader Service Card

Short Case Sealer . . .

Glue folds and seals either or both top and bottom flaps in one operation automatically. Speeds up to 3 cases a minute. Welded construction. Details, floor plans and specifications from A-B-C Packaging Machine Corp.

Circle 127 on Reader Service Card

Pallet Rollers . . .

Complete specifications, sizes and capacities are contained in Engineering Bulletin 104K offered you by Ac Engineering Associates, Inc.

Circle 132 on Reader Service Card

Considering Converting to LP-Gas? . . .

then you'll be interested in the brochure offered by Century Gas Equipment, Marvel Schebler Products Div.

Circle 18 on Reader Service Card

Use This

READER SERVICE CARD

to obtain information on any item in this issue

New Equipment & Supplies Starting on Page 117

Useful Literature Starting on Page 99

PLEASE PRINT

February 1958. Do not use after 5-15-58

Name Position

Company Kind of Business

Street

City Zone State

PLEASE	SEND	ME	ADDITIONAL INFORMATION AND LITERATURE ON ITEMS CIRCLED BELOW.																			
1	26	51	76	101	126	151	176	201	226	251	276	301	326	351	376	401	426	451	476			
2	27	52	77	102	127	152	177	202	227	252	277	302	327	352	377	402	427	452	477			
3	28	53	78	103	128	153	178	203	228	253	278	303	328	353	378	403	428	453	478			
4	29	54	79	104	129	154	179	204	229	254	279	304	329	354	379	404	429	454	479			
5	30	55	80	105	130	155	180	205	230	255	280	305	330	355	380	405	430	455	480			
6	31	56	81	106	131	156	181	206	231	256	281	306	331	356	381	406	431	456	481			
7	32	57	82	107	132	157	182	207	232	257	282	307	332	357	382	407	432	457	482			
8	33	58	83	108	133	158	183	208	233	258	283	308	333	358	383	408	433	458	483			
9	34	59	84	109	134	159	184	209	234	259	284	309	334	359	384	409	434	459	484			
10	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485			
11	36	61	86	111	136	161	186	211	236	261	286	311	336	361	386	411	436	461	486			
12	37	62	87	112	137	162	187	212	237	262	287	312	337	362	387	412	437	462	487			
13	38	63	88	113	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488			
14	39	64	89	114	139	164	189	214	239	264	289	314	339	364	389	414	439	464	489			
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17	42	67	92	117	142	167	192	217	242	267	292	317	342	367	392	417	442	467	492			
18	43	68	93	118	143	168	193	218	243	268	293	318	343	368	393	418	443	468	493			
19	44	69	94	119	144	169	194	219	244	269	294	319	344	369	394	419	444	469	494			
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21	46	71	96	121	146	171	196	221	246	271	296	321	346	371	396	421	446	471	496			
22	47	72	97	122	147	172	197	222	247	272	297	322	347	372	397	422	447	472	497			
23	48	73	98	123	148	173	198	223	248	273	298	323	348	373	398	423	448	473	498			
24	49	74	99	124	149	174	199	224	249	274	299	324	349	374	399	424	449	474	499			
25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500			

BUSINESS REPLY CARD

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FLOW

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FIRST CLASS
PERMIT No. 8066
SEC. 34.9 P. L. & R.
CLEVELAND, OHIO

Use This

READER SERVICE CARD

to obtain information on any item in this issue

New Equipment & Supplies Starting on Page 117

Useful Literature Starting on Page 99

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CLEVELAND, OHIO

PLEASE PRINT

February 1958. Do not use after 5-15-58

Name Position

Company Kind of Business

Street

City Zone State

PLEASE	SEND	ME	ADDITIONAL	INFORMATION	AND	LITERATURE	ON	ITEMS	CIRCLED	BELOW.									
1	26	51	76	101	126	151	176	201	226	251	276	301	326	351	376	401	426	451	476
2	27	52	77	102	127	152	177	202	227	252	277	302	327	352	377	402	427	452	477
3	28	53	78	103	128	153	178	203	228	253	278	303	328	353	378	403	428	453	478
4	29	54	79	104	129	154	179	204	229	254	279	304	329	354	379	404	429	454	479
5	30	55	80	105	130	155	180	205	230	255	280	305	330	355	380	405	430	455	480
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24	49	74	99	124	149	174	199	224	249	274	299	324	349	374	399	424	449	474	499
25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500

Vertical Storage
dling . . . In this
running Trak-Rak
stalled in each of
serve high storage
crane bridge has
trolley from which
an electrically oper
column equipped w
fork lift. All operat
trolled by the opera
with the carriage.
tails are available
cage Tramrail Corp
Circle 161 on Reader

Lift Truck Ren
can use modern, effi
With the Clark Ren
handling equipment
cent of investment
ing capital. May be
mary equipment nee
the demanding cond
work loads or season
Further information
is available from
ment Co.
Circle 117 on Reader

Collapsible Tip
Pallet Boxes . . .
5000 lbs., are quick
and collapsible whe
Complete details an
offered by Bige
Lumber Co.
Circle 87 on Reader

"Short Cuts to C
fits" . . . is the titl
booklet on their cor
shelving units and i
by Equipto Div., A
ment Co.
Circle 29 on Reader

Steel Shelving a
Bins . . . together
counter carts and ha
just some of the stor
terial handling equ
scribed in a 32-pg. c
you by Bernard Fran
Circle 37 on Reader

ical Storage and Han-

. . . In this system, a top-
g Trak-Rak Crane is in-
in each of two bays to
high storage racks. Each
bridge has an overhead
from which is suspended
trically operated rotating
equipped with a special
it. All operations are con-
by the operator who rides
the carriage. Complete de-
available from the Chi-
ramrail Corp.

61 on Reader Service Card

Truck Rental Plan . . .

modern, efficient material
the Clark Rental Plan you
g equipment without a
investment of your work-
ital. May be used for pri-
equipment needs or to meet
handling conditions of peak
oads or seasonal conditions.
information on this plan
lable from Clark Equip-
ment.

17 on Reader Service Card

apsible Tight-Corner

Boxes . . . Handles up to
ss., are quickly assembled
lapsable when not in use.
te details and prices are
d by Bigelow-Garvey
Co.

7 on Reader Service Card

ort Cuts to Greater Pro-

. . . is the title of a 16-pg.
on their complete line of
y units and is offered you
ipto Div., Aurora Equip-
ment.

9 on Reader Service Card

Shelving and Storage

. . . together with service
carts and hand trucks are
ne of the storage and ma-
handling equipment de-
in a 32-pg. catalog offered
Bernard Franklin Co., Inc.

7 on Reader Service Card

Movable Power Sources . . .

in capacities from 60 to 500
amperes may be provided for
cranes and hoists, production
lines, conveyor assembly lines,
moving test lines, portable or ma-
chine tools and lighting by a
Feedrail system. Full information
is available from Feedrail Corp.

Circle 33 on Reader Service Card

Crane Bulletins . . . A bulle-
tin on their Single Girder Cranes
and another on their Cranemaster
Cranes is offered you by Abell-
Howe Co.

Circle 160 on Reader Service Card

Aluminum Ladder Stands

. . . These stands are specially
tapered to let you stand closer
to your work. The entire unit is
finished with rust-resistant alumi-
num coating. A catalog on their
complete line is available from
Aluminum Ladder Co.

Circle 143 on Reader Service Card

Stacking Racks . . . made of

strong, tubular steel—adjustable
to fit any space or unit load.
Special racks designed to your
specifications with field engineer-
ing service on any installation. An
illustrated catalog giving full in-
formation is offered by Equip-
ment Mfg., Inc.

Circle 152 on Reader Service Card

"Case Studies In Modern

Lifting" . . . according to the
publisher, Globe Hoist Co., these
are factual studies pertinent to
your type of business, including
cost and time-saving information.

Circle 39 on Reader Service Card

All-Purpose Pneumatic

Tires . . . are said by the manu-
facturer, B. F. Goodrich Tire Co.,
to lower machine maintenance by
protecting equipment, cut plant
maintenance by protecting floors,
reduce breakage by cushioning
loads and reduce driver fatigue.

A tire and wheel analysis which
may result in savings to you from
20% to 50% is a service offered
by the company.

Circle 40 on Reader Service Card

**A Narrow Belt Unitized
Conveyor . . .** for handling small

dimension, light weight containers
is discussed in a brochure offered
you by Island Equipment Corp.
The conveyor may be easily
lengthened if increased production
makes it necessary.

Circle 48 on Reader Service Card

**The Economies of a Pre-
Engineered Conveyor . . .** plus

the advantage of a conveyor in-
stallation tailored to your needs
are the claims made by the manu-
facturer, Joy Mfg. Co., for the
Joy Ready-Span belt conveyor.
Each section is made up of four
pipes connected by pipe diagonals
forming a lace framed truss. Sec-
tions bolt together to form a
straight, rigid, pipe frame truss.
Full details are available from the
company.

Circle 51 on Reader Service Card

Automatic Dockboard . . .

Eliminates the hazards of loose
plates. The Hi-Lo is simply lagged
to top of present dock. It can't be
lost, stolen, or damaged. It oper-
ates on a simple counterbalance
system. Complete literature is
available from Kelley Co., Inc.

Circle 54 on Reader Service Card

Aluminum Dock Plate . . .

is three times lighter than steel
and offers such features as built-
in stop angles, has a 12,000 lbs.
load strength, is self-adjusting,
maneuverable and has beveled
edges. Available in eight different
styles and 15 different sizes. Fur-
ther information may be had from
the manufacturer, F. H. Langsen-
kamp Co.

Circle 55 on Reader Service Card

Tote Pan Truck . . . for handling tote pans, tools, jigs, dies and other fixtures is described in literature available from Lansing Co.

Circle 56 on Reader Service Card

Gearmotors For Any Use . . . says Cone-Drive Gears Division of Michigan Tool Co. Mount them at any angle, on floors, walls, ceilings, or hanging on a shaft. Capacities from 1 to 25 horsepower, with 27 standard output speeds. Compact design keeps power up, size down. Catalog 57 gives you complete specifications.

Circle 497 on Reader Service Card

No Outriggers Needed . . . on the new 7-ton Lorain SP-107 yard crane. The close-coupled, 8-ft. long, 8-ft. wide, "square" design of the carrier gives full-rated lifting capacities "on rubber" throughout the 360° swing. Another feature of this crane is independent travel that provides simultaneous hoist, swing and travel. Further information on the SP-107 is available from the company, The Thew Shovel Co.

Circle 130 on Reader Service Card

On Production Lines . . . in processing operation, in storage and warehousing and shipping, Cargotainers are said to be the answer to many of your handling problems. All models fold when not in use. Optional features include full or partial drop ends and sides; crane eyes, vertical and horizontal dividers. Full information is available from Tri-State Engineering Co.

Circle 102 on Reader Service Card

Pneumatic Airtube Systems . . . give fast and sure in-plant movement of correspondence, punch cards, drawings, samples, tools and small parts. Full details are available from Lamson Corp.

Circle 134 on Reader Service Card

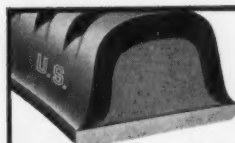
Friction-Driven Markers . . . do your marking automatically. Saves the cost of manual stenciling or stamping. Designed for easy handling installation on existing conveyor lines, case-sealers, etc. Uses quick change rubber type

Cushion Drivers, Loads, Vehicles up to 5½ Times Better!



U.S. ROYAL INDUSTRIAL TIRES

Because the U. S. Royal Innacush sponges up so much more shock, your drivers are less fatigued. Your loads are less apt to shift and break. Your trucks need less maintenance. And naturally—you cut handling costs!



THE BIG DIFFERENCE IS DOUBLE-TREAD

Outside—it's tough for longer wear, cut and chip resistance.
Inside—it's soft, resilient, specially compounded for greater shock absorption and easier riding, as well as for long wear.



United States Rubber

Rockefeller Center, New York 20, N. Y.

In Canada: Dominion Rubber Co., Ltd.

Circle No. 104 on Reader Service Card for more information

Ambrose-Augusterfer Corporation
has been awarded the
contract for all major piping
in Torresdale Filter Plant
—now under construction in
N.E. Philadelphia. Pipe being handled
weighs over 10,000 lbs. and
measures 40' by 54" in diameter.



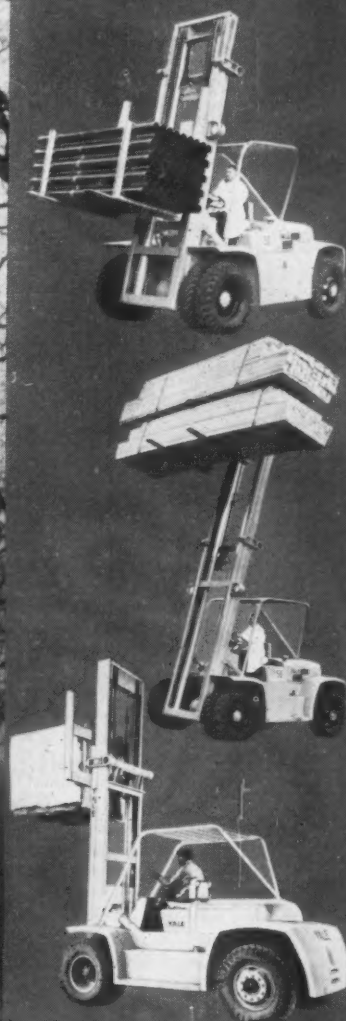
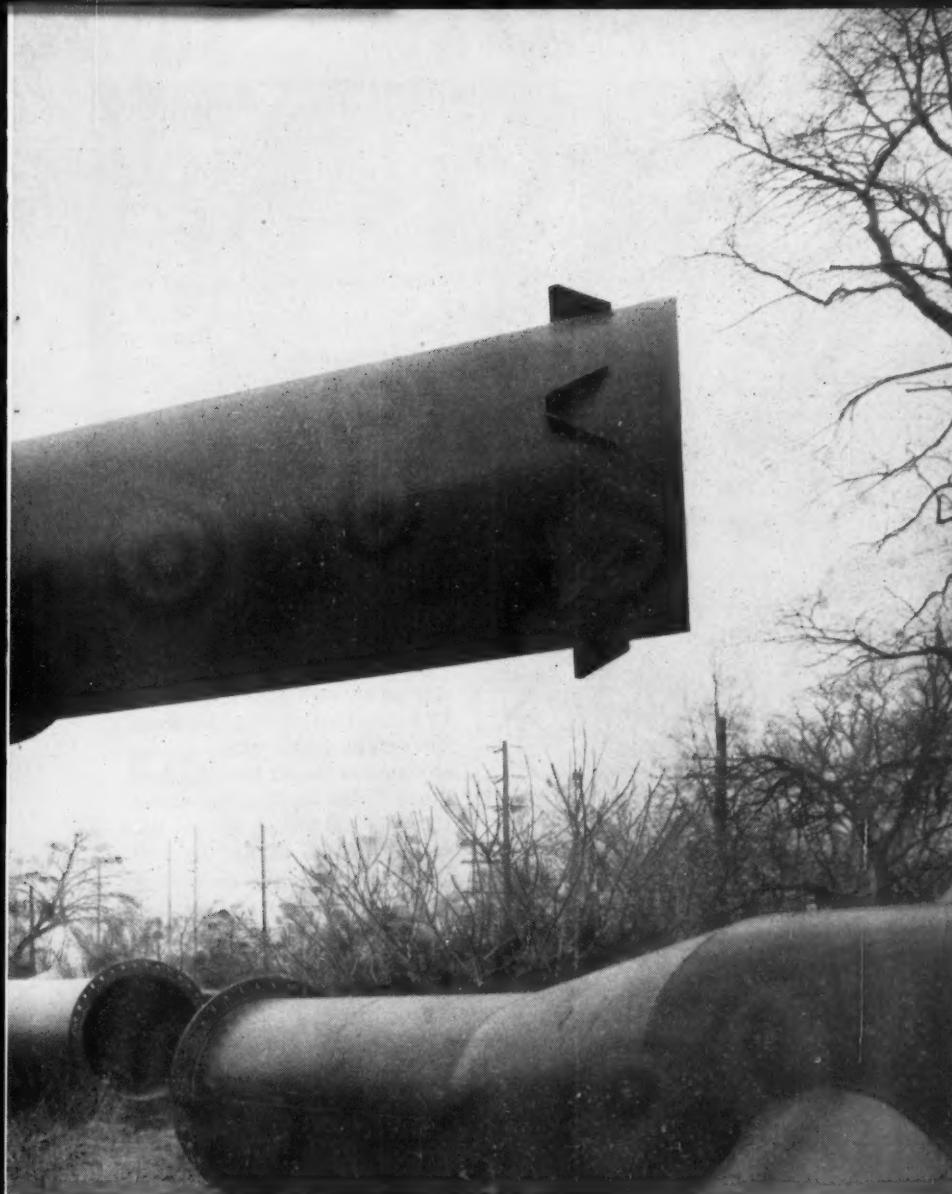
Only Yale G-3 Gas

- ① Wide Angle vision
- ② Fast cycle operation
- ③ Greater load stability

Now full visibility, extra safety and handling speed
for efficient, big-load operations...at low cost

Circle No. 113 on Reader Service Card for more information

Raw materials or finished goods
—versatile Yale high-capacity
Gas Trucks handle any type load
with extra speed, safety and efficiency.



Trucks give you all 3

Maximum visibility, easy maneuverability, high speeds, safe stability—you'll find the combination of all these vital features exclusively in new Yale G-3 Series High-Capacity Gas Trucks.

Wide-Angle Vision—Yale's revolutionary open-front design reduces frontal obstruction. Upright channels are nested—hoisting cylinders wide-spaced—lifting chains located in front of cylinders, out of line of sight. Driver sits high in center—has 300% more visibility!

Fast Cycle Operation—Yale G-3 Gas Trucks maneuver quickly into position...lift capacity loads at speeds up to 60 feet a minute...travel as fast as 20 m.p.h....spot loads accurately. This fast, smooth operation keeps materials on the move, saves time and handling dollars.

Greater Stability—Low center of gravity, broad lifting base, high underclearance, side-thrust rollers, wide channel-roller spacing, large pneumatic tires—these

and many other features that assure load stability are *standard* on Yale High-Capacity Gas Trucks.

Yale G-3 Gas and LP-Gas Trucks come in capacities of 15,000 to 20,000 lbs.—with fully automatic torque transmission, fluid coupling or standard transmission. Complete line available in capacities of 2,000 to 20,000 lbs.

Get the full story. Send for your free copy of Bulletin #5230. The Yale & Towne Mfg. Co., Philadelphia 15, Pa., Dept. A-42.



YALE*

*REG. U.S. PAT. OFF.

INDUSTRIAL LIFT TRUCKS AND HOISTS

YALE & TOWNE

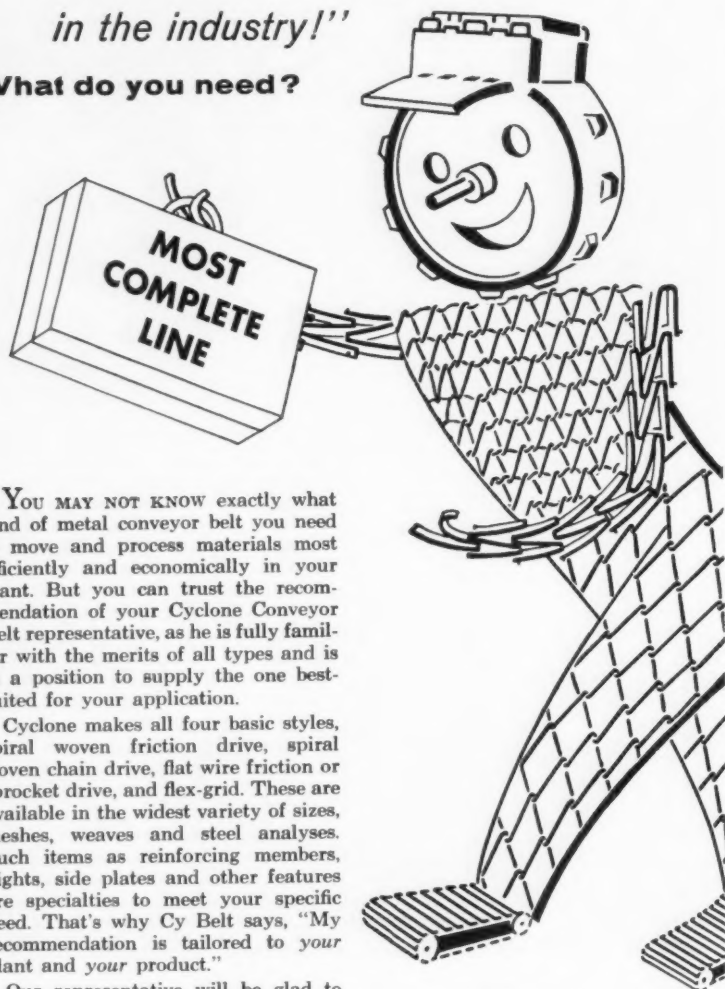
GASOLINE, ELECTRIC, DIESEL & LP-GAS INDUSTRIAL LIFT TRUCKS • WORKSAVERS
WAREHOUSERS • HAND TRUCKS • HAND AND ELECTRIC HOISTS

YALE MATERIALS HANDLING DIVISION, THE YALE & TOWNE MANUFACTURING CO. MANUFACTURING PLANTS: PHILADELPHIA, PA.; SAN LEANDRO, CALIF.; FORREST CITY, ARK.

CY BELT says

"Cyclone makes the most complete line of metal conveyor belts in the industry!"

What do you need?



YOU MAY NOT KNOW exactly what kind of metal conveyor belt you need to move and process materials most efficiently and economically in your plant. But you can trust the recommendation of your Cyclone Conveyor Belt representative, as he is fully familiar with the merits of all types and is in a position to supply the one best-suited for your application.

Cyclone makes all four basic styles, spiral woven friction drive, spiral woven chain drive, flat wire friction or sprocket drive, and flex-grid. These are available in the widest variety of sizes, meshes, weaves and steel analyses. Such items as reinforcing members, flights, side plates and other features are specialties to meet your specific need. That's why Cy Belt says, "My recommendation is tailored to your plant and your product."

Our representative will be glad to help you analyze your material handling and processing problems. His services cost you *nothing*. Just fill in the coupon today.

Prompt service to belt users is assured by two factories, one in the Middle West and one on the Pacific Coast.

CYCLONE FENCE DEPARTMENT

American Steel & Wire Division
United States Steel Corporation, Waukegan, Illinois
United States Steel Export Company, New York

**USS CYCLONE
METAL
CONVEYOR BELTS**

SPIRAL WOVEN
FLAT WIRE • FLEX-GRID

UNITED STATES STEEL

Circle No. 91 on Reader Service Card for more information

— MAIL THIS COUPON —

Cyclone Fence
Dept. A-28
Waukegan, Illinois

Please have your trained representative call on us to discuss our production problems.

Name

Company

Address

City

State

CATALOGS

Continued

or dies, and holds an eight hour ink supply. Descriptive literature is available from Adolph Gottscho, Inc.

Circle 42 on Reader Service Card

Any Man in Your Shop . . . or maintenance department can build sturdy safety railings with NU-RAIL slip-on fittings and new or used pipe in standard I. P. S. pipe sizes. A hex key and hacksaw are all the tools you need. Can be used for making stair rails, machine guards, scaffolding, etc. Full details are available from The Hollaender Mfg. Co.

Circle 137 on Reader Service Card

"Up and Over" . . . is the title of a new folder offered you by Lynch Corp. It describes Robo-Lift's clean, gentle, filling-without-scooping action for handling food, drugs, chemicals and hardware.

Circle 59 on Reader Service Card

Engineered Storage Systems . . . is the subject of a brochure published by The Paltier Corp. It discusses their bar stock racks, coil racks, drive-in racks, and stacking hardware for standard pallets, among other things.

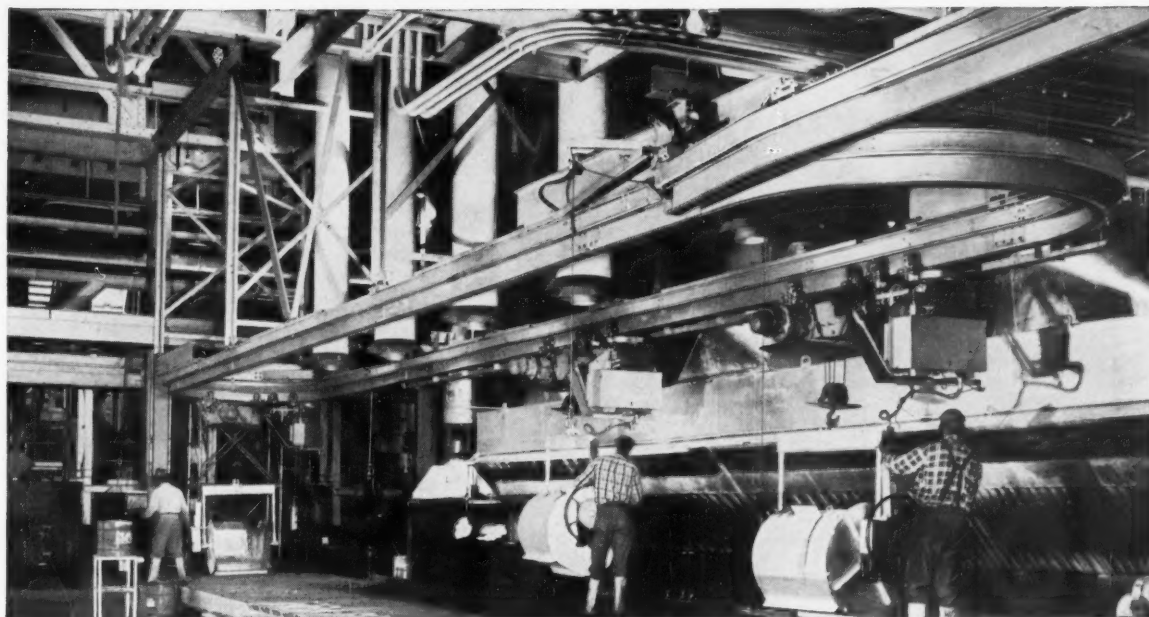
Circle 119 on Reader Service Card

Hydraulic Dock Levelers . . . The Rotary Levelator Lifts may be used for loading trucks from floor level, to move traffic from one floor level to another and for feeding machines, among other things. Capacities to 100,000 lbs. A catalog is yours for the asking from Rotary Lift. Co.

Circle 83 on Reader Service Card

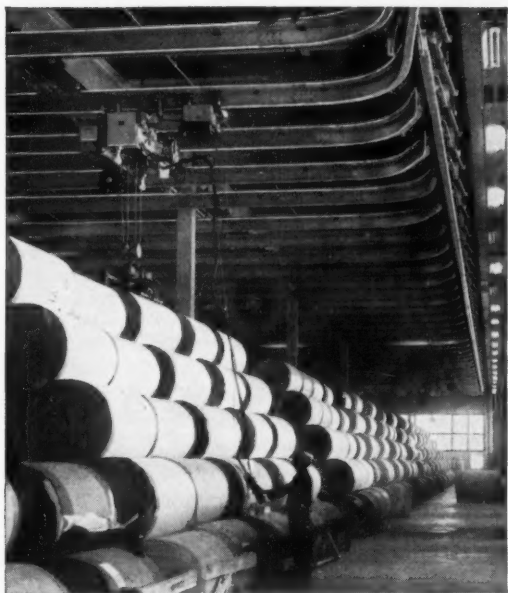
Pressed-On Solid Industrial Tires . . . To insure peak performance, Goodyear has perfected two special tread stocks. The Universal Compound insures long wear, maximum cut-resistance. It's standard for conventional solid tires in all sizes. The Power Saver compound combines high cut-resistance with lowest rolling resistance. Further information is available from Goodyear Tire & Rubber Co.

Circle 41 on Reader Service Card



Here's a way to make your lost ceiling space pay off

AMERICAN MONORAIL



Floor space is unobstructed, free of traffic with American MonoRail overhead handling.

***increases plant capacity...
cuts handling costs...
reduces worker fatigue...
minimizes damage and loss.***

You can get more profit out of your plant. American MonoRail Engineers can show you how to convert lost ceiling space—eliminate obstructive storage around machines—and gain additional operating area. Find out how you can process work in motion, cut down idle time, and assure safe handling of product. Work can be done at comfortable heights—worker fatigue lessened—heavy loads eliminated—and damage to product reduced.

Let American MonoRail Engineers plan your handling. Write for full information today.



ENGINEERED MATERIALS HANDLING

13129 ATHENS AVENUE
CLEVELAND 7, OHIO



AMERICAN MONORAIL

MEMBER OF MATERIALS HANDLING INSTITUTE AND MONORAIL MANUFACTURERS ASSOCIATION

Circle No. 4 on Reader Service Card for more information

FEBRUARY, 1958

41

K-W Battery

SALES AND SERVICE
IS AVAILABLE IN
ALL PRINCIPAL CITIES

North, East, South or West. Regardless of your plant's location you will find a KW Battery Sales and Service station nearby. A call will bring a factory trained battery technician who can and will help you solve your individual problems. He's at your service. Use him soon!

For fast local service consult the listings below.



YALE



ELWELL-PARKER



MARFORGE



AUTOMATIC



MERCURY



CLARK



BAKER



BARRETT



LIFT TRUCKS



CRESCENT



REVOLVATOR



LEWIS-SHEPARD



TOWMOTOR



MOTO-TRUC



RAYMOND

Akron, Ohio	Mr. Ford Ransweiler	Po. 2-7458
Albany, N.Y. (Rensselaer)	Mr. Chauncy Van Aistine	779070
Atlanta, Ga. (Stone Mountain)	Mr. Lamar Bagwell	8727
Baltimore, Md.	Mr. S. W. Betz	Belmont 5-6028
Birmingham, Ala.	Mr. James Gambill	Al. 2-3105
Chattanooga, Tenn.	Mr. Turney Rich	Taylor 1-6554
Chicago, Ill.	Mr. Robert Rinehart	Ambassador 2-9600
Cincinnati, Ohio	Mr. Shird Moore	Kirby 1-1113
Cleveland, Ohio (Olmstead)	Mr. Roy Neugebauer	Sp. 7-2569
Denver, Colo.	Mr. R. L. English	Genesee 3-6322
Des Moines, Iowa	Mr. James Thompson	Cherry 4-9107
Detroit, Michigan	Mr. John Osgood	University 2-6525
Grand Rapids, Mich.	Mr. Stanley Stevens	Glendale 2-6446
Indianapolis, Ind.	Mr. John Kistner	Melrose 5-4410
Jackson, Miss.	Mr. Gray Hilsman	2-6671
Los Angeles, Calif.	Mr. Paul S. Godber	Adams 3-4286
Louisville, Ky.	Mr. Robert Fisher	Juniper 4-1155
Milwaukee, Wis.	Mr. Mike Zurich	Evergreen 4-0340
Nashville, Tenn.	Mr. Arthur Wilson	Worth 4-5190
New York, N.Y.	Mr. John W. Chase	Cortland 7-5445
Omaha, Nebraska	Mr. O. T. Christensen	Prospect 3533
Pittsburgh, Pa.	Mr. Squire T. Mair	Forest 4-3700
St. Louis, Mo.	Mr. Harvey S. Gershenson	Je. 5-3210
San Francisco, Calif.	Mr. John Scott - Mr. Wm. Meehan	Douglas 2-3428
St. Paul, Minn.	Mr. E. J. Campbell	Prospect 6-8027
Springfield, Ill.	Mr. Paul Staab	2-5341
Tampa, Fla.	Mr. J. G. Forster, Jr.	621591

K-W BATTERY CO.
Skokie, Illinois

Quality Industrial Batteries — originators of the "Piggy Back Charge"

Circle No. 52 on Reader Service Card for more information

CATALOGS

Continued

Hand Stapler Used Like a Hammer . . . to fasten tags and labels to wooden crates and boxes. Also available is a hand stapler for use in fastening protective linings and paddings in close corners. Further information is available from Arrow Fastener Co., Inc.

Circle 128 on Reader Service Card

Vibrating Conveyor . . . open or closed pan and tubular types to meet every requirement of tonnage, speed sanitation, contamination, abrasive and explosive conditions are described in literature available from Ajax Flexible Coupling Co., Inc.

Circle 3 on Reader Service Card

Conveyor Belting . . . No matter what your product or process is, there's an Ashworth Belt design and wire size to help you carry it more efficiently and economically. An illustrated catalog is yours for the asking from Ashworth Bros., Inc.

Circle 6 on Reader Service Card

Crane Accessories and Handling Devices . . . Sheet and angle lifting clamps, drum tilters and lifters, hand grips for sheet steel and drum openers are just some of the items discussed in literature available from Merrill Brothers.

Circle 70 on Reader Service Card

One Man Car Door Opener . . . The average time required by one man to open or close a boxcar door with the Nolan Model H is 20 seconds or less, the manufacturer claims. Just a few quick pulls on the anchor chain opens the most stubborn door in a jiffy. Full details available from The Nolan Co.

Circle 76 on Reader Service Card

Solid Industrial Tires . . . A 16-page catalog full of facts, specifications and suggestions to help you save on solid tires is available from The Monarch Rubber Co.

Circle 72 on Reader Service Card



Louden handling is overhead handling at its very best

Overhead handling has many fundamental advantages which become evident when compared with any other type of materials handling. But the combination of Louden's long experience and wide range of equipment for overhead handling is frequently the key to turning these basic advantages to greatest account. A good example is the die storage facilities of the American Stamping Company at Cleveland, Ohio.

The American Stamping Company wanted to avoid the die storage problems of their old building, the crowded and cramped stacking of dies along walls and the space-wasting wide aisles required for trucking dies into storage. With Louden engineering and a Louden Stacker Crane, they found the perfect answer to their problem, *everything* they desired in a space only 40 feet square. The overhead fork lift, suspended from an underrunning crane, moves freely and maneuvers easily in narrow space-saving aisles and any of the stamping machine attendants can use it.

When you have a materials handling problem, call on Louden, the pioneer of overhead handling. Benefit by Louden's unequalled experience and broad array of service-proven equipment. Most Louden installations pay for themselves in months; some have done so in a matter of weeks. You can discuss your problem with a Louden field engineer without cost or obligation. Write or wire today.

Louden

MONORAIL & CRANES

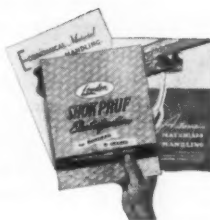
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A Subsidiary of Mechanical Handling Systems Inc.

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FEBRUARY, 1958



Get the latest information on the best in modern materials handling systems. Write today for your copy of "Economical Material Handling," a 52 page book full of how-to-do-it ideas. If you are interested in automation, ask for the new book on Louden Automatic Dispatch, "Automatic Materials Handling." With either you will receive the latest information on Louden Shok-Pruf Electrification, new safety in power for cranes and monorail systems.



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LOCKS ITSELF

pays for itself!

It's the safe, sensible, economical way to handle wet or dry, hot or cold bulky materials. Simple, one-man operation does the job with amazing speed... cuts cost of hand unloading by at least 50%.

This rugged Roura Self-Dumping Hopper is built to withstand the terrific knocks and bangs of rough usage. Extra heavy gauge metal and welded construction mean years of dependable service. Fits any standard fork or platform lift truck. Also available mounted on live skids or with malleable or rubber tired casters. Sizes from $\frac{1}{2}$ to 2 cubic yards. Thousands in use in America's biggest industries.

ROURA

Self-Dumping

HOPPER

WANT MORE FACTS? Clip this coupon... attach to your letterhead... sign your name... and mail to...

ROURA IRON WORKS, INC.
1411 Woodland Ave, Detroit 11, Michigan

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! VIEWS

AND TRENDS

Wanted: A Marriage

Any handling man with a good eye will see the attributes of "Gertrude". She's a beauty of a warehouse system. Her attractions are unwrapped in this issue.

The same man will also spot the blemish that keeps her from being "Miss Universal Warehousing".

It's not Gertrude's fault. She's beautifully put together. Maybe she's way ahead of her time. Her trouble—and that of other systems designed for the same purpose—is the man-handling she has to put up with. When she has done her fine, fast job of producing assembled orders, men of muscles take over. And they can't work nearly as fast as she does. There's no good way yet to mechanize the packaging of miscellaneous and odd-lot items.

So, we're looking for a wedding. Gertrude, and others like her, need mechanical mates that can help them produce. Otherwise, her species will be slow to propagate.

Keeping The Plant In Shape

Taking that close look at expenses, companies are finding maintenance costs high on their check lists.

For the past few years, when "production" was the prime concern, maintenance was not likely to get nearly the attention it deserved. Now, some business forecasters say, there will be fewer outlays for plants and new machines this year—at least through summer—than there were in '57.

It seems, then, that keeping the plant in shape will be more important to us than since any time most of us can remember.

But we're ready. Mechanized material handling and maintenance methods have come along hand-in-hand during the last few years. For many jobs they've become inseparable. As handling costs went down, so did maintenance costs. We think this combination will be increasingly effective and significant in the months ahead.

A New Spring Dress

You have noticed, we hope, that FLOW is constantly working to give you more valuable information faster. Through our "distilling" process, we have tightened articles, making them easier and faster to read. With more features, we've covered more industries and operations per issue. Our art department has come up with brighter layouts—also to make reading easier.

In March you'll see another change. We've had a readership expert working on all departments—including news, new products, useful literature, all the rest—and we're sure you'll find them better than ever.

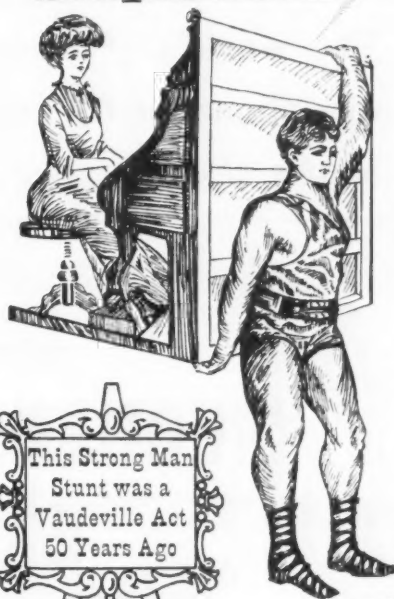
Ed Leighton Executive Editor

FLOW

Colossal! Amazing! Stupendous!

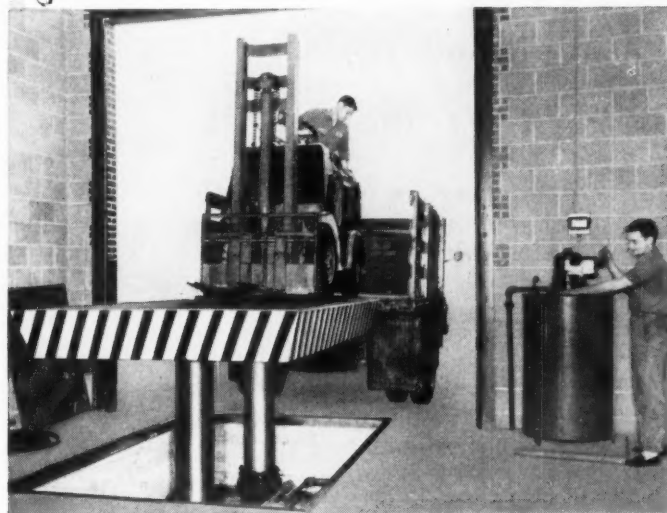
WORKMAN LIFTS 10 TONS WITH ONE HAND

'on the control of a
GLOBE OiLIFT,



**Find out how OiLIFT Power
will do YOUR heavy lifting**

With one hand on the control lever, or pushbutton, of an oil-hydraulic powered Platform Lift, a lone workman can perform Herculean tasks in lifting, loading and materials handling. The 10-ton Globe OiLIFT (left) loads and unloads fork lift trucks. Similar Lifts move traffic over split-level floors to eliminate ramps . . . position materials for machine or conveyor feeding . . . load trucks, trailers, rail cars, airplanes.



Whether the load is 1,000 or 50,000 lbs. . . whether the lift is a few inches or 50 ft. . . the Globe OiLIFT which does the job is assembled from standard components: power cylinders, superstructures, controls, etc. Each OiLIFT is backed by a 30-year world leadership reputation in manufacturing heavy duty lifts.

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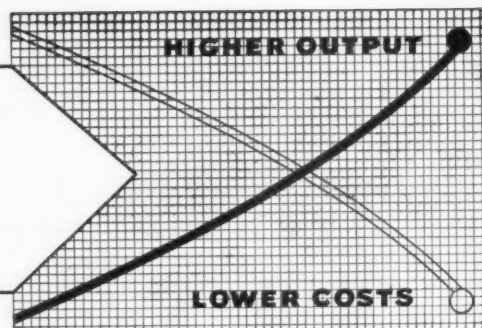
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The world's greatest display
of labour-aiding equipment
shows the way to . . .



THE INTERNATIONAL MECHANICAL HANDLING EXHIBITION

AND MATERIALS HANDLING CONVENTION

Earls Court, London, 7-17 May, 1958

The greatest display of mechanical handling equipment ever presented—showing the latest ways to increase output and reduce cost in every industry from bottling to building—awaits your inspection at Earls Court, London, 7-17 May, 1958. Here, the solution to every materials handling problem can be seen in action;

methods and systems planned with the makers to meet special requirements, whether they involve only a modest device or a complete, large scale installation.

Everyone concerned with positive advancement in production methods should plan *now* to visit this vitally important event.

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THE JOURNAL OF INDUSTRIAL MECHANIZATION



**Mail this enquiry today for
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To: The Exhibition Manager, Mechanical Handling, Dorset House, Stamford Street, London, S.E.1, England
Please send the 1958 Exhibition brochure, season ticket, etc.

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Patented features include precision hydraulic location, eliminating wear plates

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Four components only achieve the ultimate in simplified construction.

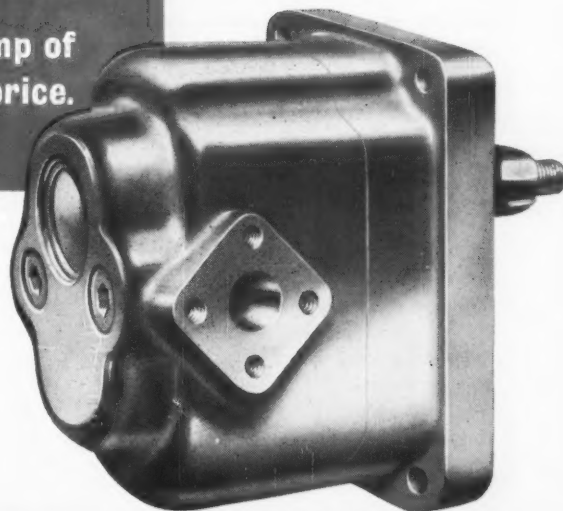
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News About AMHS

Clark Award Deadline March 28; Prizes Total \$2500

Theme is "Materials Handling—Management's New Frontier"

March 28 is the deadline for entries in the 6th Annual Clark Awards competition. This year's subject, "Materials Handling—Management's New Frontier". All papers must be postmarked by midnight of that date. They should be addressed to: AMHS National Chairman of the Honors & Awards Committee, Mr. Edward S. Smith, c/o Whitehead & Kales Company, 58 Haltiner Street, Detroit, Michigan.

All members of AMHS, non-members, and students of material handling are eligible to participate. Five cash prizes will be awarded, totaling \$2500. First prize is \$1250, with subsequent awards of \$650, \$300, \$200 and \$100. All remaining entries will receive certificates.

Compliance with all the rules of the contest is essential. Briefly, these rules are as follows:

All papers must be typed or printed, double space on 8½ x 11 inch paper, with 1½ inch margins on the left. Photographs and illustrations must be suitable for reproduction. There is no restriction on the length of entries. In past years, however, the average paper has been 2000 to 3000 words long.

The contestant's name, address and AMHS Chapter affiliation must be on a separate sheet attached to the paper. The only identification on the main body of the paper should be the title. Ten copies must be submitted for judging; it is also suggested that an additional copy be sent to the local

chapter Honors & Awards Committee Chairman.

Each paper will be judged according to the analysis of subject; value in its particular field; originality; organization and arrangement of material; and visual aids.

AMHS reserves all rights of publication and copyright for all entries it receives. Only papers which have not previously been published or submitted for publication are eligible.

Each contestant must waive all proprietary rights to any and all unpatented ideas, systems, machines and parts disclosed in his paper, and must agree that no confidential relationship exists between himself and AMHS or the prize donor, regarding any subject disclosed in the paper.

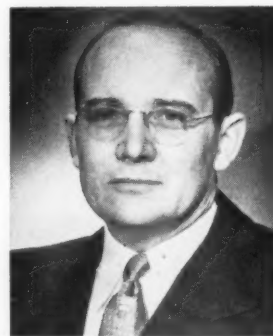
Each contestant is requested to identify by patent number, name of inventor and date of issuance of patent, each patented invention referred to in his paper.

The association has outlined the following prerequisites of a good paper, as a guide to persons who wish to submit entries: It should deal with a subject of interest to a large number of readers. It should state the problem clearly, and should offer a discussion or solution to that problem, along with evidence supporting the solution. The language should be understandable to the engineer who is not a specialist in that field, but may be interested in it.

Further details may be obtained from local AMHS Chapters.

AMHS Will Sponsor Technical Sessions At 1959 MHI Show

The American Material Handling Society, Inc. has been selected to sponsor technical sessions to be conducted in conjunction with MHI's 1959 national ex-



E. W. McCaul

position of material handling equipment.

This cooperative project between MHI and AMHS was announced recently by **E. W. McCaul**, chairman of MHI's Technical Sessions Committee and vice president, Jervis B. Webb Co.

The Material Handling Institute's Exposition of 1959 will take place in Cleveland's Public Auditorium June 9 through 12, 1959.

Program Complete For New Jersey Chapter Conference & Exposition

The program for the New Jersey Chapter's Handling Conference & Exposition is now complete. The date is February 5, 1958. The topics that will be discussed include: "Top Management's Inter-

Here's a busy fleet that stays in port

Fleet of 14 Allis-Chalmers fork lift trucks speeds handling of shipments at Port of Chicago

There is a steady flow of goods through the Port of Chicago . . . a smooth, two-way interchange between ship, rail and trailer. Expediting this flow is a fleet of 14 Allis-Chalmers fork trucks operated jointly by Illiana Storage Company, Great Lakes Warehouse Corp., Packers Terminal Warehouse Corp., and Seaway Stevedoring Company.

Their choice of trucks was made with an eye to the future as well as the present, for they know this fleet would be called on to work under more demanding conditions when the St. Lawrence Seaway is completed. Already, the wisdom of their selection has been proved by the Allis-Chalmers fork trucks, as is shown by the accompanying letter from Al Williams, Warehouse Superintendent.

Ask your Allis-Chalmers material handling dealer to show you how these fork trucks can streamline your operations, make your handling economical and fast.



Illiana Storage Company, Inc.
GENERAL MERCHANDISE STORAGE TRAN.

January 24, 1957

Allis Chalmers Manufacturing Company
Milwaukee, Wisconsin

Attention: Mr. C. A. Leets, District Manager

Dear Sir:

The nature of our business is such that very little allowance can be tolerated for down-time due to mechanical failures or poor service.

Uninterrupted handling of material under peak load conditions is essential to our customers and ourselves in this highly competitive business.

Allis-Chalmers fork trucks have made it possible for us to operate at costs much lower than we had thought possible. A thorough understanding by your dealer of warehousing and stevedoring problems have simplified our maintenance problems.

ILLIANA STORAGE CO., INC.

Al Williams
Al Williams, Warehouse Supt.

AW:LL



Negotiating ramps under full load is the all-day job of this Allis-Chalmers fork truck. This is where heavy-duty construction pays off. The industrial-type Allis-Chalmers engine handles this job with a comfortable reserve of power, keeps on working month after month.



Ease of handling accounts for extra work done, especially where precise maneuvering is required. Durability is another reason for the popularity of Allis-Chalmers fork trucks here.

ALLIS-CHALMERS, MATERIAL HANDLING DEPARTMENT,
BUDA DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS 

BH-49

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Stacking Problem? call EMI



anything can be
"well stacked"
 or shipped on EMI racks

Big or little, strong or fragile,
 anything stacks or ships better on
 EMI quality racks. They
 protect stock, cut handling costs
 and speed inventory.

EMI RACKS are made of strong,
 tubular steel and are adjustable to fit
 any space or unit load. Special
 racks designed to your specifications
 with field engineering
 service on any installation.

Write for our illustrated catalog
 before you plan additional storage
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 or shipping equipment.

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**EQUIPMENT
 MFG. INC.**

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AMHS NEWS

Continued

est in Plant Layout and Material Handling", "How to Modernize and Manufacture Efficiently in an Old Multi-Storied Building", and "Planning the Layout for an Existing Multi-Storied Plant".

National Rodeo will Be Held in Los Angeles

The National Fork Truck Rodeo will be held in Los Angeles, in May 1958. **Homer Poston** of the Los Angeles Chapter was elected Chairman of the Rodeo at the Annual Board Meeting in June.

Entries from all regions and at least one from each chapter is expected. Entries should be sent to the Los Angeles Chapter.

LOS ANGELES, CALIF.—The January meeting of the Los Angeles Chapter featured a panel discussion of Industrial Packaging. **Kyle Hendry, Harold Fraumberger, and John Heller** were panel members and **Andy Briggs** was moderator. "Retail Packaging and Wrapping for Local Delivery", "Wholesale Packing for Shipment by Railroad and Truck", and "Packaging for the Prevention of Loss and Damage" were the discussion topics.

HAMILTON, ONT., CANADA—A recent meeting of the Hamilton Chapter featured a comprehensive tour covering the complete manufacture of wire and wire products at the Greening Wire Company. Forty members of the Chapter viewed the many methods of handling at the plant.

ROCHESTER, N. Y.—The January meeting of the Rochester Chapter featured a panel discussion on "Labor and Management—How They Look At Automation". The panel consisted of the following: **John Pilitere**, President Rochester Independent Workers; **Nat Goldfinger**, Research Department Economist AFL-CIO, Washington, D. C.; **Walter Foertsch**, Business Consultant, Rochester, New York.



New Battery Unlocks More Power...Saves You Dollars



Here's the secret. Unique advanced tubular construction. Every positive plate packs more power. So you get greater battery efficiency—a more compact battery for a given capacity rating.

New Exide-Ironclad Battery packs up to 44% more power

It's today's most efficiently designed industrial truck battery. Gives you more power in the same space. More power and life per dollar of cost. Boosts the work capacity of your trucks. So you can get more work done . . . work a longer shift. For a given capacity, the new Exide-Ironclad

costs you less, yet lasts longer. It's your best battery buy. Only Exide offers it. Write for detailed bulletin. Exide-Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

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SINGLE-STROKE

J-R LIFT-TRUCKS



**Mac says: "They load faster
—handle easier
—last longer!"**

—that's what makes the Barrett Model J-R one of the most popular lift-trucks of all time! With Barrett's patented compound lift mechanism, it takes only one easy sweep of the handle and the skid load is on its way.

Fast loading...easy anti-friction travel...on-a-dime maneuvering...help you cut handling time and effort to the minimum. And Barrett's hydraulic release check gives you safe, cushioned lowering without danger to operator or materials.

Model J-R is built for the long haul...for years of dependable service...for lowest repair bills. Yet you pay no premium for its extra quality. No comparable lift-truck offers more value—or undersells the Barrett J-R. Capacities range from 2500 to 4000 lb. For complete details, use the handy coupon.

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ONE MAN DOES MORE THAN 3 OR 4
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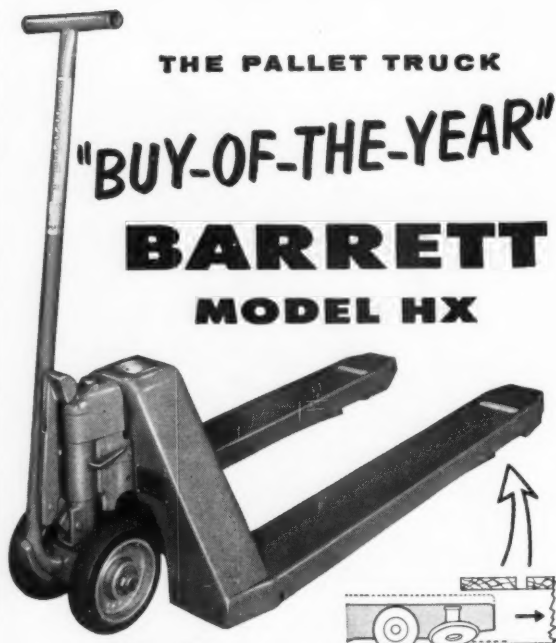
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Please send Bulletin 555-1 on the Model J-R
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Company.....
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City.....Zone.....State.....

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THE PALLET TRUCK
"BUY-OF-THE-YEAR"
BARRETT
MODEL HX
with the
Revolutionary New
Flying Saucer
wheels!

Diagram shows how angular-mounting entry wheels climb bottom board of double-face pallet...prevent "push-away" annoyance. An exclusive Barrett feature.



Plus
all these big-quality features
Mac says, "Check these plus values!"

- "Unitized" hydraulic pump and ram—cuts service worries.
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- All welded-ribbed design for light weight and exceptional strength
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25"-27" WIDE—48" LONG
OTHER SIZES AVAILABLE

2000- and 2500-lb. capacity. Other models in
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FLOW



News About SIPMHE

1958: A Year of Opportunity

By John Mount
President SIPMHE



THE PACKAGING FIELD, and particularly the packaging materials segment, is a very accurate barometer of business conditions.

During the latter part of 1957, this barometer clearly indicated that certain classes of industry were levelling off, or, to be more specific, falling off. Indeed, some economists were alarmed enough to start talking about a slight recession.

Despite this slowdown in 1957, managements' views of business are good for 1958—particularly for the second half of the year. But to bring about this betterment, managements are also viewing their expenses and cost figures. The familiar sharp pencil will be honed this year like never before. That's why 1958 offers us such a great opportunity. We, as engineers of packaging and material handling, are the ones who can do the most for our companies to keep costs down and profits up.

Our everyday experience tells us that a manufactured product has three general essentials in its cost make-up. First, the material of which it is made, and second, the labor that makes it. There's little anyone can do in these times to lower the basic cost of either of these two essentials.

But we can and must do something about the third one. That's the cost of the service that delivers the product to the buyer. It includes, among other things,

transportation and protection in transit. Here we can put our engineering ability to use, and come up with a new idea or material to lower costs. And here we can very well "make or break" our companies as far as profits for 1958 are concerned.

During the past ten years or so, we have seen many new developments in packaging materials, and in the techniques involved in using them. Such progress is wholesome for our industry. But it didn't come while we sat around waiting for it, and it won't come that way this year either. It can only come through imagination and research—through constant trying. More and better packaging materials and handling methods can still be developed, *if we will go out and develop them.*

With cost reductions more urgent than ever before, we have a challenge before us. This is the year we can make ourselves heard as never before. This is truly our year of opportunity.

COLUMBUS, OHIO—A tour of the August-Wagner Brewery was the feature of the Central Ohio Division's January 21st meeting. The group has several other plant tours scheduled for 1958. It meets the third Tuesday of every month.

NEW YORK, N. Y.—Vendor members in the Eastern Division's area held their annual Vendors' Night recently, as part of a regular meeting. Salesmen represent-

ing a number of material handling and packaging equipment manufacturers displayed their latest products, and also had a chance to discuss them with interested viewers. It was the second time this Division held such a meeting.

PHOENIX, ARIZ.—Chris Seferlis, Hughes Aircraft Company, is the new president of the Arizona Division. Other officers are: George Peters, Reynolds Metals Co., vice president; Joe Rice, International Metals Co., secretary; and Les Miller, Motorola, Inc., treasurer. This chapter, founded in 1956, meets the third Monday of every month.

BALTIMORE, MD.—The Maryland Division presented its second annual Packaging Exhibit recently. There were 41 participating companies, and more than 1200 viewers. The program was highlighted by a banquet, at which John Mount, SIPMHE national president awarded a service plaque to Ed Steinwedel, past president of the Division. Shortly after this meeting, the group held its fifth discussion meeting on the Purdue Packaging Course. Speakers for this discussion were from Rheem Manufacturing Co., Continental Can Co., and St. Regis Bag Co.



SPEAKERS TABLE at Maryland Division's Packaging Exhibit (left to right): Art Manger, Eph Lazarus, Ed Greipenkerl, George Arnold, Don Kellot, Bill Boettinger, John Mount, Ed Steinwedel, Bill Bradshaw and Karl Winter.

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**SPECIFICALLY
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for
**Materials
Handling
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Self-contained model — for use where dashboard space is available.



Separate speaker model, for rear or remote location of chassis, with front-mounting of speaker and microphone.

The new **MOTOROLA DISPATCHER** radiophone with **TRANSISTORIZED CIRCUITS** gives you:

- **Smallest Mobile 2-Way Radio Ever Developed** . . . transistors and printed circuits help engineer radio down to fit conveniently on *any* vehicle.
- **Lowest Current Drain** . . . down to $\frac{1}{4}$ the current needed for other mobile radios, as little as 6 ampere-hours for an 8 hour day.
- **Transistorized Power Supplies** . . . designed to operate from 6, 12, 24 volts DC and up, plus 117 volts AC. No converters or battery tapping. Fully transistorized voltage regulation.
- **Highest Speaker Volume** . . . an operator away from his vehicle can hear messages even in noisy areas — every word is sharp and clear.
- **Rugged, Reliable** . . . long-life transistors, printed circuits, rubber cushioned mounting — *everything* designed to withstand jars, jolts and vibration.

Here's the mobile radio that's truly tailored to speed your materials handling. This rugged radio is easy to mount, requires only a trickle of current, and can be heard in the noisiest areas. No matter what kind of industrial vehicle you have — gasoline, LP gas, diesel or electric powered — there's a Motorola DISPATCHER radio for you. Models for electric vehicles feature transistorized voltage regulation to guard against varying voltages. Now your materials handling supervisor can have full control as he "rides with the driver" of each vehicle. Get all the information and you'll see why an investment in radio soon pays for itself in the time it saves.



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GIVING FULL DESCRIPTIONS



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The Speediest Dock Truck Made

On the dock and in the plant, this all-new, all-around performer cuts minutes from every handling trip. The Cargo Scout has the fastest travel speed (up to 6½ m.p.h.) and the fastest lift speed (up to 72 f.p.m.) of any model in its class. Exceptionally compact and maneuverable, the Cargo Scout scoots into and out of the most confined areas quickly, easily. Fast electric truck acceleration, 360-degree turning and ease of operator mounting and dismounting are a few more of its time-saving features.

In 2,000- to 4,000-pound capacities, the Cargo Scout incorporates basic ELPAR electric truck dependability . . . your assurance of *twice* as many years of service as comparable gas models—with only *one-third* the operating and maintenance costs.

GET ALL THE FACTS

about the Cargo Scout, and the money-saving advantages of ELPAR electric trucks. Send for Cargo Scout Bulletins and the ELPAR Lift, "Gas vs. Electric Trucks."



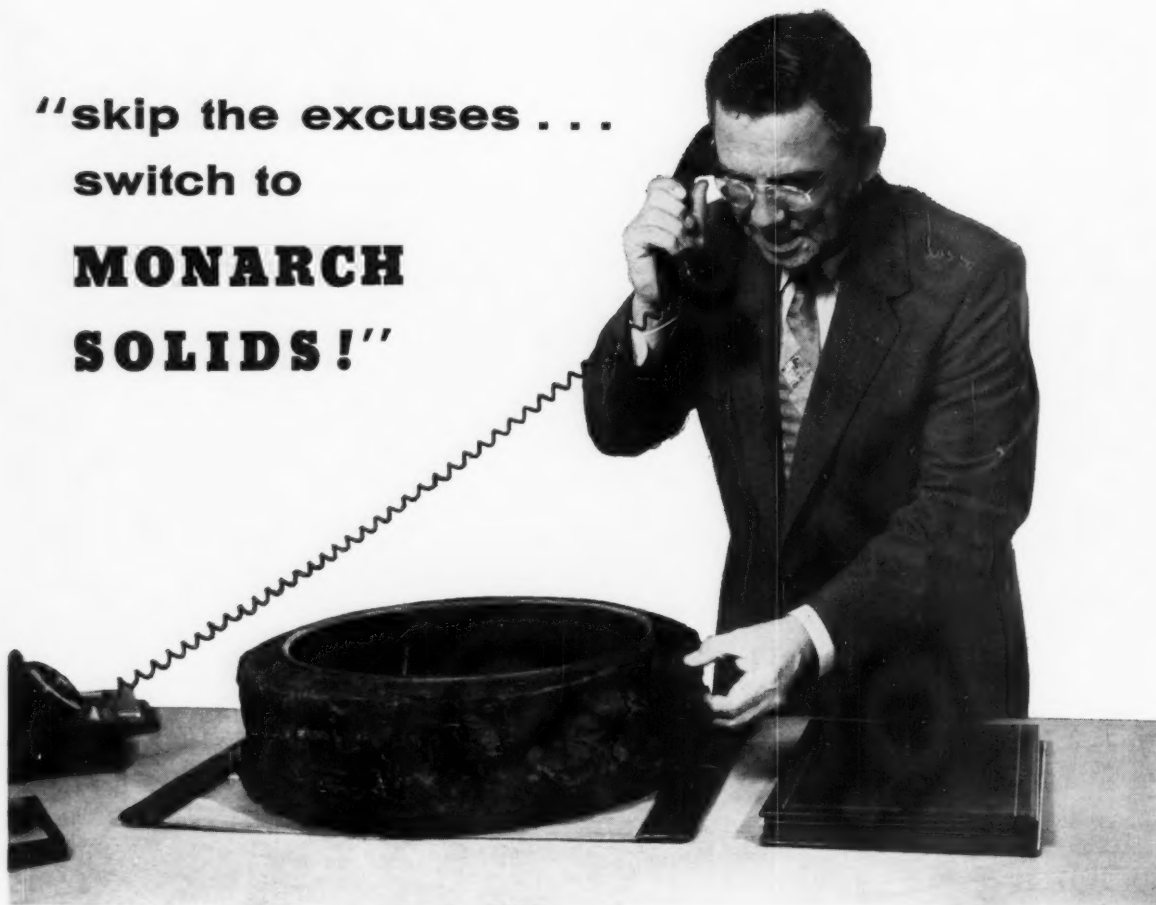
THE ELWELL-PARKER ELECTRIC COMPANY

4232 St. Clair Avenue • Cleveland 3, Ohio

Twice the Life...One-third the Operating Costs

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**"skip the excuses . . .
switch to
MONARCH
SOLIDS!"**



. . . and cut tire replacement costs!



When the chips are down, profits are governed by operating costs. And management takes a dim view of purchasing policies when staple items . . . such as lift truck tires . . . require frequent replacement.

Thousands of lift truck users have effected substantial savings by specifying MONARCH industrial solid tires. These high-performance tires last longer and save maintenance dollars because they are made from special Compound T-48C . . . the toughest natural rubber stock developed to date.

Why wait 'til your replacement costs become critical. *Switch to MONARCH solids . . . and begin saving right now!*



Ask your nearest MONARCH dealer, or write direct, for new 16-page CATALOG MR-457. It's full of facts, specifications and suggestions to help you save more on solid tires.



**THE
MONARCH
RUBBER COMPANY**

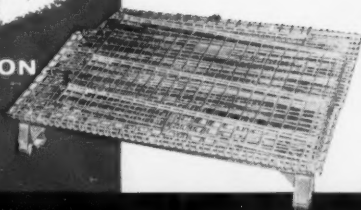
210 LINCOLN PARK • HARTVILLE, OHIO

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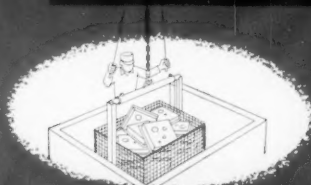
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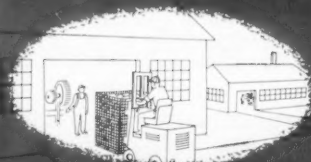
Wherever you handle
materials . . . *there's a need for*
CARGOTAINERS®



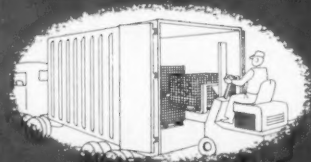
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STORAGE



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On production lines; in processing operations; in storage and warehousing; in shipping or in inter-plant materials moving—CARGOTAINERS answer many of your materials handling problems.

CARGOTAINERS are available in Clearview and Strip Base models, each in several sizes and capacities. Optional features include full or partial drop ends and sides; crane eyes; vertical and horizontal dividers. There is a CARGOTAINER which will exactly meet the requirements of virtually every application.

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CARGOTAINERS are made of heavy gauge steel wire, and coated with pre-heated, corrosion-resistant vinyl aluminum paint. They are light in weight but strong and rugged for dependable, maintenance-free service year after year, even under exceptionally severe conditions.

Standard capacities are 2,000, 3,000, 4,000 and 6,000 pounds; standard sizes 32" x 40" x 24", 32" x 40" x 28" (3,000 lb. cap.), 36" x 46" x 24", 40" x 48" x 24" and 48" x 48" x 24".

Our new catalog gives full information on CARGOTAINERS, and also on Tri-State Pallets and Tri-State Conveyor Guard. May we send you a copy?

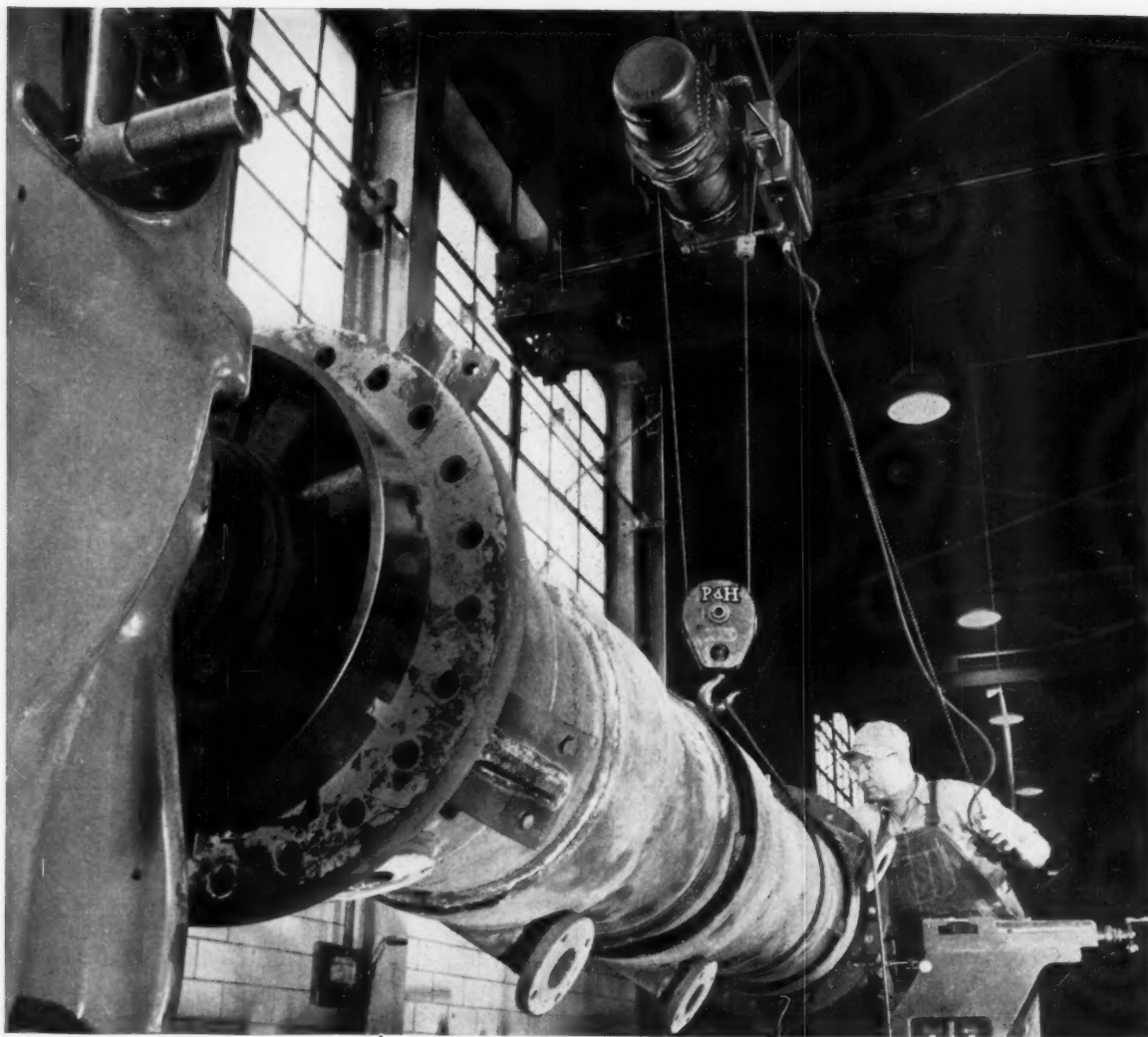
CARGOTAINER
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Circle No. 102 on Reader Service Card for more information



Really Cuts Downtime!

Only **P&H** HEVI-LIFT HOIST
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P&H Hevi-Lift hoists are equipped with the RCD brake — the best brake that has ever been put on an electric hoist. It's a tough "mill-type" brake just like those used on big overhead cranes. It is virtually maintenance free — and eliminates 40% of the total hoist maintenance as a result.

The reason is simple: total brake movement is only 1/32 of an inch. In a P&H RCD brake there's no brake linkage, no laminations, and only *one* simple point of adjustment.

Moreover, the RCD brake (rectified direct current) moves *quicker* for precise inching and accurate

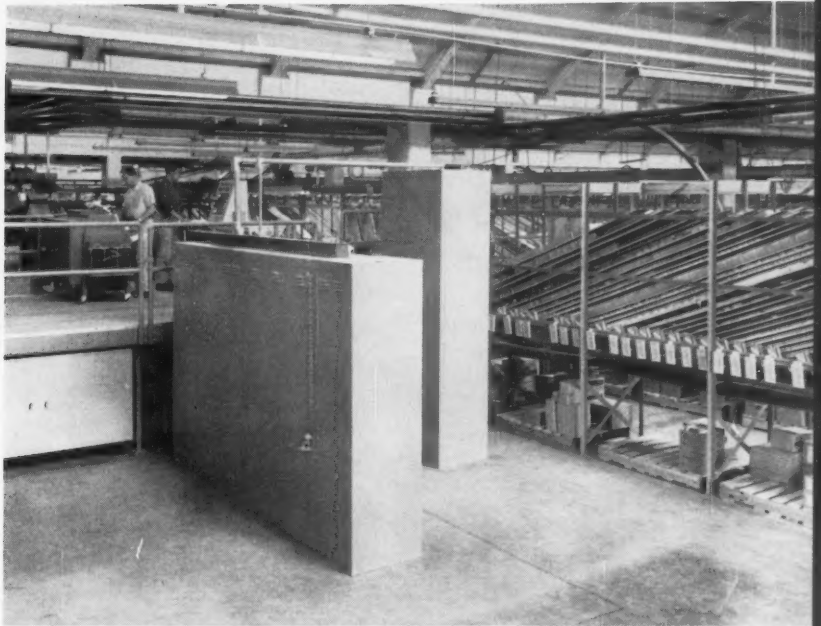
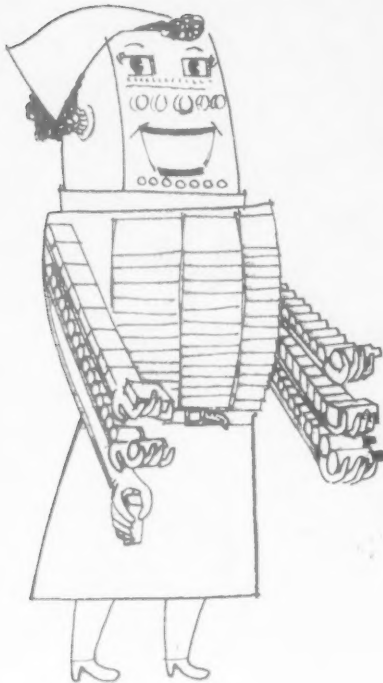
spotting. Hevi-Lift ratings range from 1000 to 40,000 lbs. capacity.

Write for "Hevi-Lift Bulletin H-5" to Dept. 210F, Harnischfeger Corp., Milwaukee 46, Wisconsin. And for expert job analysis and engineering assistance on hoist installations contact your local P&H hoist distributor.

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P&H ... quality and service for 74 years

Circle No. 135 on Reader Service Card for more information



Meet "Gertrude". Top secret until now, she is described here in detail. Gertrude handles small-package, odd-lot merchandise like it has never been done before. She's an . . .

Automated Order Picking Machine

by Scholer Bangs
Western Editor

GERTRUDE may be one of the most significant names to come out of the West in some time. This "lady" has an electronic brain, electro-mechanical muscles and punched card coordination which enable her to pick orders with amazing speed and accuracy. And she doesn't care how small or odd-shaped the items may be.

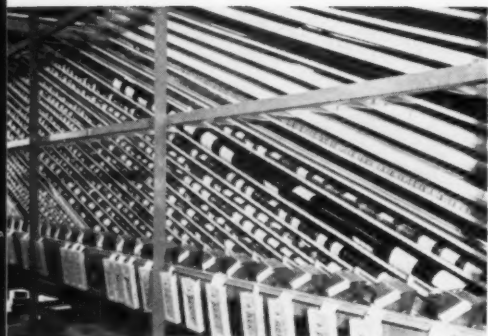
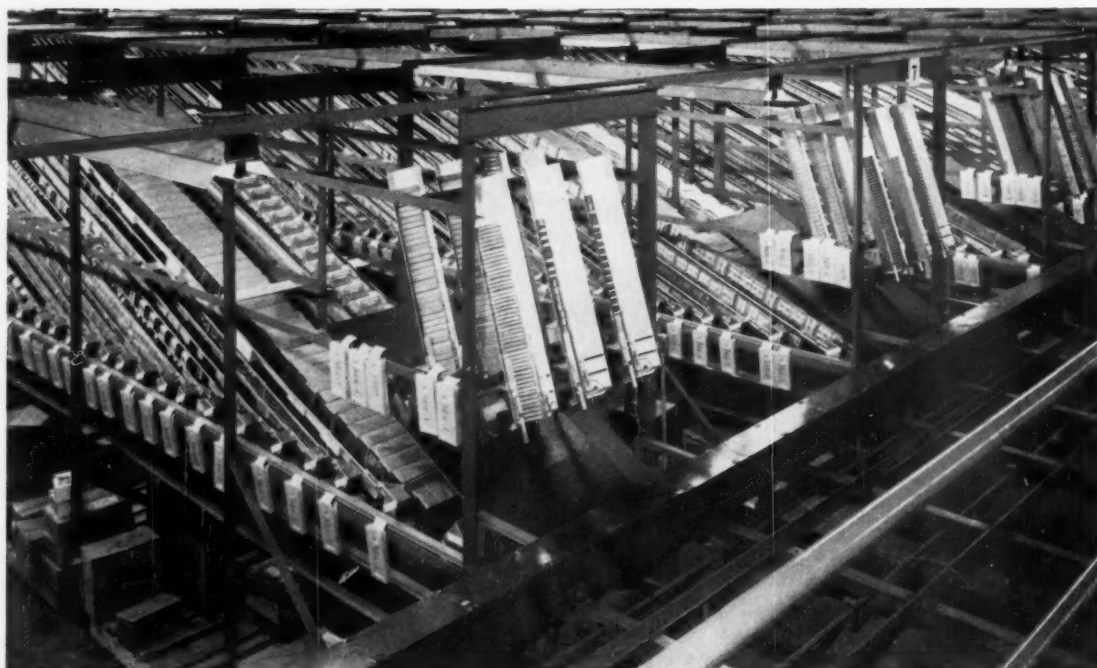
Gertrude occupies 10,000 square feet of Brunswick Drug Co. in Vernon, a suburb of Los Angeles. She dispenses 1800 items in filling as many as 2000 drug

store items in 15 seconds. She checks each for accuracy and flashes a notice to her single operator if an item is out of stock or fails to release at her command.

Gertrude was named by a Texas drug wholesaler during early development of the system. The name stuck for the project that was, until recently, treated as top secret by Brunswick people. Her official designation is "RSV-Mark 1". That comes from the name of Roy V. Schwab, Brunswick's president, who okayed the project some two years ago. The name was given by

"Gertrude"...

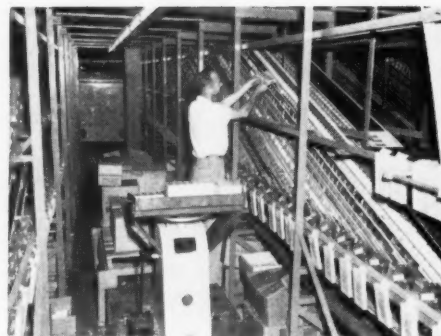
DIGITAL ANALYZER on control bridge (right) tells what Gertrude has done with an order. It also gives instant reports of item shortages or machine malfunction. From the control bridge, operator views successive bays of Gertrude's item-loaded racks (below). Items are fed to order-gathering conveyors.



STORAGE RACKS are tailored to receive various sizes of bottles and boxes. Note empty rack in center of photo. This is reported immediately on the data analyzer.



RELEASE GATE is opened by solenoid to drop item onto conveyor belt. Falling item depresses metal strip to close circuit and reset solenoid for next impulse.



ELECTRIC STOCK TRUCK brings stock from storage areas of warehouse to fill dispensing chutes. It operates easily within narrow aisles between bays, for side-loading.

Donald G. Gumpertz, owner of Industrial Electronic Engineers, of North Hollywood, who designed and installed the equipment.

Eighteen Bays Feed Five Main Lines

Products are stored in two facing banks of nine bays each. Running between them, and at right angles, are five parallel belt conveyors, each leading to packing stations. Each bay holds 100 steeply sloped gravity chutes. These are dimensionally adjustable and stocked by clerks working between bays. Items may be single packages—including bottles—or quantity packs of 6, 12 or 24 units. All are restrained until the order comes from the central control for a solenoid to flip the chute gate and release an item upon a bay conveyor. This crosses over the five main conveyors. A gate diverts the item to the proper main conveyor.

In the 15-second filling of a single order, various chutes in all 18 bays may send items coursing on 18 bay conveyors toward a pre-selected central belt. Thus they are channeled to a waiting packing station. Gertrude sees to it that successive orders are assembled on "clear" main conveyors.

Donald Gumpertz explains the use of gravity—instead of more mechanized release—in this way.

"Our design philosophy was to reduce to a minimum the number of gears and levers that might be required. We felt that they would complicate maintenance. There is little that can go wrong in a gravity chute, floored with Masonite to give best slippage. And the solenoid-actuated, item-release gates need little attention once they have been synchronized to impulses from the electronic command unit."

The complex structures of Gertrude are the punched card data converter and the programming mechanism working with a magnetic memory storage drum. Electromechanical moving parts are the chute gate solenoids and release gates, 18 primary conveyor belts serving the 40-foot deep bays, the five main belt lines, and the 90 solenoid-actuated gates to shunt items from bay conveyors to main lines.

Slow Movers Hand Picked

Processing a typical order begins in the main office. Punched cards relating to invoice items stocked in the machine are drawn from a master file. An "A" is marked opposite those in automated stock. Others must be hand picked from conventional warehouse shelves.

Invoice and cards go by conveyor to Gertrude's bridge. Here the control operator feeds the cards into the converter. Seconds later he is informed that the order is completed by lighted numbers appearing



BELT CONVEYOR carries items directly to packaging area. Partly filled shipping containers will be placed on conveyor, with purchase order. It goes through warehouse to receive manually-picked items not held in Gertrude's racks. Completed orders return on roller conveyor (background) to be sealed and labeled.

in windows of a digital data analyzer. One segment of the analyzer gives the number of the main conveyor belt used for the order; another the account number; and a third the quantity of items dispensed. A fourth section shows, by a four-digit code, the item which was missed in the order assembly.

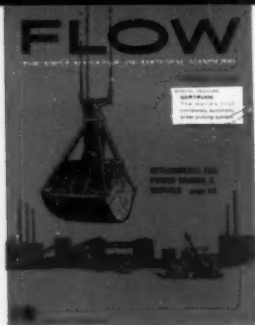
When an order has been checked by the controller as completed, the master invoice is dropped, with shipping label, down a chute from the bridge into the waiting item-filled box. If the invoice shows hand-pick items, invoice and container go on a conveyor which makes a circuit of stock shelves. It then returns to the packing table, is sealed in a carton, and is conveyed to the delivery dock.

Gertrude Demands High Activity

The extent to which the system will be reproduced in other warehouses will depend upon a number of factors, according to Gumpertz. For one, stock items should be sufficiently active to keep the machine in full-shift operation. While an installation can have a smaller or larger number of bays than the Brunswick machine, it should release enough manpower to handle other warehouse jobs—which otherwise would have to be filled by outside hiring—and pay initial plus operating costs of the equipment.

A guide to the application of Gertrude is shown in the way Brunswick determined the 1800 items marked for automated order filling. An activity survey showed that, of the 35,000 items stocked, 5000 accounted for 83 percent of the firm's daily traffic. The 1800 most-called-for items represented 52 percent of stock movement.

Gertrude's "learning curve" is still being graphed, but latest reports are that she is scoring close to 100 percent in efficiency. Although final figures cannot yet be made to show her full value, her order-filling economies indicate a comfortably quick amortization of her cost.



COVER STORY

What you should know about . . .

Attachments for Power Cranes and Shovels

Part I

THE correct size or capacity is obviously the first step in picking the right equipment for your job. To determine the most effective size for handling the job efficiently and at lowest net-cost-per-yard, the following factors must be considered:

1. Type of Material

What you handle will play an important part in the size of equipment you need. For instance, for digging hard material, the increased power and heavy construction of large equipment would be a big advantage. In easy digging, mobility and close clearances of small machines should pay off in cost-less handling. (See Fig. #1 for a typical example of how types of material can vary output.)

2. Weight of Material

Sizing for dragline or clamshell operation, means that special consideration must be given to weights of material. The following tables gives approximate weights of various material per cubic yard.

Material	Wt. Per Cu. Yd.	Material	Wt. Per Cu. Yd.
Earth, Moist	2500 lbs.	Loose Stone	2700 lbs.
Sand, Dry	2700 lbs.	Clay, Wet	3000 lbs.
Sand, Wet	3300 lbs.	Coal	1350 lbs.
Gravel	2900 lbs.	Cinders	1100 lbs.

These approximate weights should be checked with actual weights and allowances made to eliminate overloading.

3. Depth of Bank

The deeper the cuts to be worked, the greater the importance of studying possible advantages of larger equipment. In shallow cuts, the difficulty in getting a full load plus frequent move-ups may give smaller equipment an actual advantage. It may give lower cost-per-yard handling and sometimes even a larger output per hour.

4. Clearances Involved

Clearances may limit the operation of certain equipment. Working in tight quarters is not efficient, but if much close work is necessary, keep the equipment size down to where it can operate comfortably. Clearances vary for different machine sizes and for different manufacturers as well. You should consult the manufacturer's specifications for exact data.

5. Volume of Work Available

Regardless of the economy of equipment tailored to the correct size for current work, sufficient work must be in sight to pay-off the capital investment. And, good prospects for future work must be available



CLAMSHELL BUCKETS can be adapted to handle and rehandle many different kinds of bulk materials.



DRAGLINE BUCKETS are excellent tools for many types of bulk handling. Here it is used to load trucks.

to convert the investment into profits and return of capital for future replacement equipment. (Fig. #2 shows the average useful life of bulk handling equipment. Figures are based on 2000 operating hours per year.)

Attachments Available

Three basic types of attachments are available for power machines; the shovel boom, the crane type boom, and the hoe boom. These attachments are generally interchangeable in the field. The basic purpose of the shovel boom is for shoveling and the hoe boom for hoeing. All other material handling tools, such as buckets, grabs, and special hooks, etc., are attached to a crane type boom.

Shovel Boom Attachment

The shovel attachment consists of a boom, dipper stick, dipper, and the mechanism for tripping or open-

ing the door at the bottom of the dipper. Power for the shovel motions comes from the main machinery on the basic unit through a cable or roller chain.

The shovel is designed to operate against a face or bank. Because its design permits power to be applied to force the dipper into the bank, it can dig even the hardest materials.

The size of shovel you use depends upon the output you wish or the output governed by the particular characteristics of the job. In either case, it is important to consider:

1. The size of dipper.
2. The radius required to reach the digging area.
3. The radius required to reach hauling units.
4. If dumping onto stockpiles, does the shovel have sufficient lift for the required dumping height?
5. In digging, how high is the bank? The required

(Continued on next page)

FIG. #1

POWER SHOVEL HOURLY OUTPUT IN CUBIC YARDS

(Shovel Capacity)

Class of Material	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{2}$
Moist Loam or Light Sandy Clay	85	115	165	205	250	285	320	355	405
Sand and Gravel	80	110	155	200	230	270	300	330	390
Good Common Earth	70	95	135	175	210	240	270	300	350
Clay, Hard, Tough	50	75	110	145	180	210	235	265	310
Rock, Well Blasted	40	60	95	125	155	180	205	230	275
Common, with Rocks and Roots	30	50	80	105	130	155	180	200	245
Clay, Wet and Sticky	25	40	70	95	120	145	165	185	230
Rock, Poorly Blasted	15	25	50	75	95	115	140	160	195

ATTACHMENTS FOR POWER CRANES AND SHOVELS

(Continued)

digging range may determine the size of the shovel.

6. The required clearance height.
7. Physical clearances of the machine when working in confined areas.

Hoe Boom Attachment

The hoe attachment consists of an auxiliary gantry, boom, dipper stick, and dipper. It is designed to dig, below ground level for the most part, and to spoil the material near the work or load it onto hauling units. It combines the pull-in digging action of the dragline with the rigid control of the shovel. Its positive action permits digging some of the hardest materials.

To determine the size of hoe for your job, consider the following:

1. Dipper width. (Most trench work is on the basis or a specified width.)
2. For all other hoe work, (other than trench) the dipper should be chosen on a capacity basis.
3. Digging ranges. Check: a. maximum depth to be dug; b. greatest working radius; c. dumping height.

Crane-Type Boom Attachment

The crane-type boom attachment is used in conjunction with digging tools, hooks, grabs, buckets, weights,

AVERAGE EQUIPMENT LIFE

Capacity	$\frac{3}{8}$ to $\frac{3}{4}$ Cu. Yds.	1 to $1\frac{1}{2}$ Cu. Yds.	2 Cu. Yds. and Over
Shovels and Hoes	5 years or 20% yearly	6 years or 16.67% yearly	8 years or 12.5% yearly
Draglines and Clamshells	5 years or 20% yearly	9 years or 11.11% yearly	12 years or 8.33% yearly
Capacity	$2\frac{1}{2}$ to 5 Tons	10 to 15 Tons	20 Tons And Over
Cranes	5 years or 20% yearly	9 years or 11.11% yearly	12 years or 8.33% yearly

FIG. #2 This shows average life for bulk handling equipment. Figures are based on 2000 hours per year.



POWER HOES combine the pull-in digging action of the dragline and the rigid control of the power shovel.

etc. However, the basic principles of crane hook operation apply as the element of lifting is always involved.

Clamshell Bucket Attachment on Crane Boom

The clamshell bucket is two scoops hinged in the center and with holding arms connecting the head block with outward ends of clam halves. A closing line is reeved through blocks on the hinge and the head so that when it is pulled in, by one of two operating drums on the main deck, the bucket closes. It is opened by releasing the closing and hoisting line while holding the bucket with the holding and lowering line. These buckets are available in a wide variety of sizes and in heavy duty type for digging, medium weight for general purpose use, and in lighter weight for rehandling light materials.

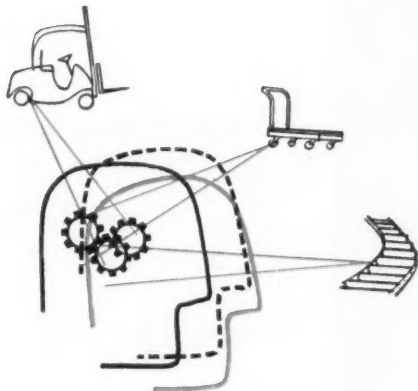
Bucket size depends on (1) the length of the crane boom (2) the weight of the material, and (3) the weight of the bucket.

To select a clamshell bucket for your job, you must consider:

1. Crane Capacity:
 - a. Determine closing line pull in pounds.
 - b. Determine safe working gross load capacity.
 - c. Determine (1) size of closing line, (2) size of hold line.
2. Clearances:
 - a. Determine headroom (clearance over bin, car, stock pile, etc.)
 - b. Observe space limitations that might limit width or open length of bucket.
3. Work To Be Done:

Every material offers a certain resistance to pene-

(Continued on page 110)



BRAINSTORMING MATERIAL HANDLING

EVER THOUGHT OF BRAINSTORMING as a means toward solving your handling problems? The Society of Industrial Packaging and Material Handling Engineers, at its short course in Atlantic City, found that material handling and packaging men make ideal participants in brainstorming meetings. Do you have any "unsolvable" problems in your plant? You might give this group thinking technique a try.

The SIPMHE short course "pupils" chose a problem and in several fifteen-minute brainstorming sessions produced the ideas we have correlated and listed below. Like ideas are printed together. A suggestion that contradicts another is printed after it in italics. The question they chose was: *How can we attract people into our profession?* Here are the answers:

In Our National Organization We Should . .

Recommend salary standards for packaging men.
Set up a code of ethics for our profession.

Set up a code of ethics for our profession.
Merge all packaging and handling societies
Consolidate all trade shows.
Break up the national group into smaller districts.
Keep the local chapters well-informed as to what's going on.

Have more meetings in resort spots.
Make sure our shows have plenty of exhibitor space Work closer with vendors all year instead of just at show time Get more visitors to the show.
Add student chapters.
Work with Canada to set up standards.
Separate retail, military, and industrial packaging.
Organize more chapters Hire professional organizers to set up more chapters.

In Our Chapters We Should . . .

Fire up enthusiasm among our members Encourage more mixing among our members.

(Continued on page 113)

What Is Brainstorming?

Brainstorming, a method of creative thinking centered around the group rather than the individual, is an answer to the old question: How can many brains be pooled to solve a single problem?

It differs from other methods of group thinking chiefly in the way it regards the judging and criticizing of ideas as a separate function from creating ideas. This is done by a sequence of action, as follows:

1. State the problem.
2. Think about the problem. As thoughts come to mind, they should be called out or written as quickly as possible. (A time limit on thinking is important).
3. Put the ideas in categories.
4. Judge and criticize the ideas. Pick the best ones to act on.

As you can see from this list, the free flow of ideas is not blocked by criticism.

How To Brainstorm

The free flow of ideas is the hub on which brainstorming turns. Here are four rules that can help to insure brainstorming success:

1. Don't judge your ideas as you think. Just call them out so they can be written down.
2. Turn out as many ideas as you can—quantity begets quality.
3. Let loose with wild ideas. Some very workable schemes have sounded crazy at first.
4. Get ideas working in combinations. Take someone else's idea and add to it . . . change it . . . reverse it . . . and take something away from it.



◆ FROM STORAGE RACK . . .

Patterns are filed and stored on metal racks in air conditioned vault

◆ . . . VIA SPECIAL RACK . . .

They're carried on a custom built rack that keeps them safe, handy for checking

Patterns Need Plush Treatment

A WOOD MASTER foundry pattern is like an old violin. It can't take rough handling. It's sensitive to temperature and humidity variations. And if it turns up damaged when you need it, repair or replacement costs can be hefty.

Crouse-Hinds Company, Syracuse electrical equipment maker, made sure its 25,000-plus patterns would get special treatment when it added a new plant building: the whole fourth floor was turned over to the pattern department. It has its own storage vault, a windowless room with thermostatically controlled heat and constant humidity.

Completely catalogued, any pattern can be pulled from storage quickly. Wood masters are housed in metal racks. There's plenty of space for the big cope and drag sections of production patterns used in floor molding processes.

THE HANDLING PROBLEM cropped up because of pattern department location. Patterns stored on the fourth floor of one building are used in non-ferrous and iron foundries—each in a separate building. Moving requisitioned patterns over the distance between foundries and protecting them from damage, took some special planning.

THE ANSWER Crouse-Hinds developed is a rack (see photo) tailored to the job. Metal pins from slots to hold the pattern upright, keeping them from bumping in transit and making inspection easy. A metal chain holds each row of patterns in place. Cope and drag sections have their own place; a platform on the front of the rack carries them. The bottom of the rack is designed like a pallet to receive the forks of an electric truck.

- When an order comes in from one of the foundries, pattern department men pull the needed pieces from storage, load them on the rack and take off with their high priced load for the pattern check station. The same plate patterns may be used to pour both aluminum and grey iron. It takes an expert pattern maker to make sure that the gating is right for each day's use. If they need gating changes, they're trucked to pattern repair in the iron foundry building.

Delivery first to the iron foundry, then to the non-ferrous foundry is the schedule. Metal racks store the plate patterns until molders get their production orders. The big cope and drag sections are delivered right to the molding floor.

Teamwork Saves \$1 per Ton

HOW would you like to save a dollar a ton on the material you handle this year? Lightning Moving & Warehouse Co., Phoenix, Arizona, is doing that with a fleet of eight lift trucks (four LP-Gas powered and four hand lift).

The firm has several warehouses. It was in the largest (75,625 square feet of storage space) that the big savings were made. In the past only hydraulic hand lift trucks were used. When they designed an annex to the warehouse it was with powerized truck operation in mind. Older portions were revised to permit best use of the trucks.

The warehouse is equipped with docks designed for standard box cars. But many refrigerator cars are used by railroads serving the area and Lightning must sometimes ship in them. Unfortunately, those cars have higher beds than standard cars and, as a result, lift trucks must climb up and down ramps. Slippage could be a problem. The fluid coupling transmissions on the trucks have proven equal to the job however.

Handling savings were derived from comparing "before-and-after" loading and unloading speeds. With a powered lift truck three men are needed, two in the car and one on the truck. Without the truck it takes five men half again as much time. Savings to date—\$41,600.

The 10-year-old hand lift trucks are still very much a part of handling at Lightning. They help keep the powerized trucks on the big jobs by shifting loads over short distances (10 feet or so). Also, they move loads out of the way to speed operation of the powered trucks.

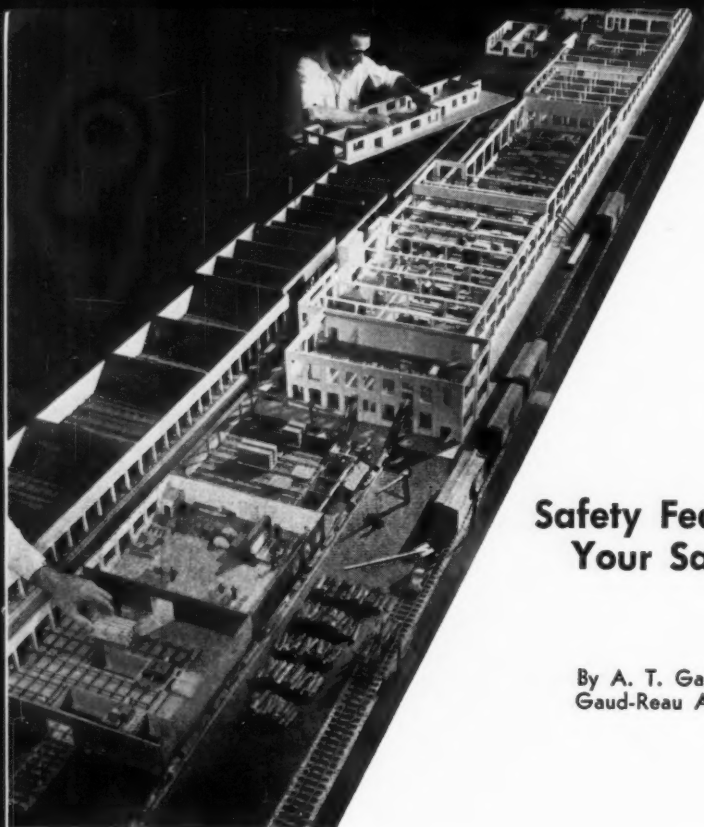
Photos courtesy of Yale & Towne Mfg. Co.



FORK TRUCKS handle loads in and out of freight cars regardless of floor height. High bed refrigerator car makes it necessary for truck to climb ramp.



HAND LIFT TRUCKS, formerly only means of handling at Lightning warehouse, now supplement powered trucks. They clear aisle and move loads short distances.



Planning For

PART II

Safety Features in Handling Equipment Your Safeguards Against Accidents

By A. T. Gaudreau, Consultant
Gaud-Reau Associates

Last month, Part I told how to reduce your plant's accident rate by planning for plant safety. It showed how scale models can expose hazards by revealing mistakes in aisle widths, overhead clearances, etc., before they develop.

ARE your material handling operations as safe as possible? What causes handling accidents? Can safety be improved?

Let's take the common types of handling equipment and talk about the safety features of each. It's possible you can reduce accidents in your plant.

Equipment today has been engineered for safe, dependable operation. Each type has many built-in safety features. (See chart on this page.) These are your safe-guards against handling accidents. The safety features built into equipment are there to prevent accidents. Teach operators to take advantage of them.

Here are the types of equipment, some of the common accidents they get into, and how they can be prevented.

Overhead Cranes

Common overhead crane accidents include:

1. Loads falling.
2. Swinging loads hitting something.
3. Low-slung loads hitting workers.
4. Cranes on same runway colliding.
5. Cranes crashing into runway end stops.
6. Fires.
7. Crane operators falling out of cabs.

Most of the accidents can be cut by using the crane's safety features. Dead-man control, automatic

THESE SAFETY FEATURES CAN BE BUILT INTO HANDLING EQUIPMENT	Overhead Cranes	Mobile Cranes	Elevators	Industrial Trucks	Conveyors
Dead Man Control	/	/		/	
Automatic Stopping Devices	/	/	/	/	/
Limit Switches	/	/	/	/	/
Warning Devices	/	/	/	/	/
Emergency Exits	/	/	/	/	/
Over-Load Signals	/	/	/	/	/
Outriggers	/	/	/	/	/
Governors	/	/	/	/	/
Wheel Guards	/	/	/	/	/
Fire Extinguishers	/	/	/	/	/
Overhead Guards	/	/	/	/	/
Spark Enclosures	/	/	/	/	/
Machine Guards	/	/	/	/	/
Guard Rails	/	/	/	/	/

*Dead Man Control—Automatically applies brake when operator releases controls.

*Limit Switches—Prevent overloading.

*Outriggers—Braces to prevent upsetting.

*Governors—Speed Controls.

*Spark Enclosures—Housings designed to withstand internal explosions.

Plant Safety

stopping devices, warning devices, and emergency exits will all help you cut accidents.

Mobile Cranes

Mobile cranes are used to move heavy, awkward loads. They lift high and carry loads over areas where work is going on. These cranes often move over rough, soft, or wet ground.

When accidents do occur with mobile cranes they usually involve either the whole crane, the crane boom, or the wire rope. Built-in safety devices automatically guard against the dangers of overloading, boom leverage, swing arc, and other operation factors.

They also have cut-out switches, over-load sound signals, boom stops, outriggers, and operator safeguards built-in.

Industrial Trucks

Most industrial truck accidents stem from faulty machine controls, traffic collisions, improper loading, and operator negligence. In any case, truck operation is dependent largely upon such conditions as aisle widths, inclines, ramps, cross traffic, fixed obstructions, traffic density, floor-load capacities, and overhead clearances. (See Part I of this article, January Flow, for safety in plant layout.)

Truck maintenance, operator training and an analysis of the plant layout become the essential starting points in planning for safe truck operation. Built-in safety features combined with the above points should lead to safe truck operation.

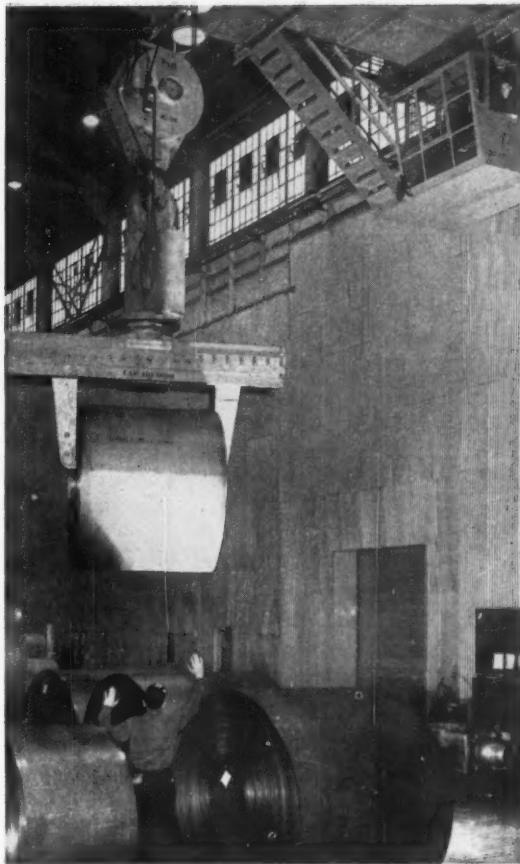
Conveyors

Conveyor safety can be increased by guards or railings around all exposed drive mechanisms. Overhead guards, rail guards, hand rails, covers, and enclosures are other protectors.

Conveyor safety, like the other equipment, depends on the condition of the equipment, operating conditions, and how well you have planned for safety.

Elevators

Statistics show that a large percentage of freight-elevator accidents are serious and very often fatal. Manufacturers now can install positive, automatic safety devices to prevent most of these accidents. Older elevators that often lack these safety devices, can be corrected by dependable door interlocks, floor leveling controls, and proper sheaves and rope.



OVERHEAD CRANE handles raw materials in storage area. Floor worker controls operation with signals.



DRIVER'S OVERHEAD GUARD and hydraulic load stabilizer are safety features available on fork trucks.



"BY USING pallet racks and storage engineering we've cut one day's expenses from our warehousing costs every week." This statement was made by officials at a Consolidated Companies warehouse, where a floor-level handling system was replaced by one that features high stacking. They're planning to convert most of the 40 warehouses in their state-wide chain to the pallet system of storage.

Originally, this warehouse had an unwieldy material flow pattern. As many as five separate handling moves were needed for each carton stored. Now cartons are moved only twice from the time they arrive in carload lots until they are broken down into small orders for grocers. And now half of the warehouse stock is available for order-picking; formerly only a third could be used.

Here's how it was done: Incoming shipments of groceries used to be palletized, then moved from the dock to piles on the warehouse floor. Each pile was an island of storage and working stock. The pallets that made up an island were arranged in rows four or five deep. Starting from the center of the island, cartons were stacked four high on the pallets, until the outside row which was used for order-picking. Here the pallets held working stock, piled two high.

As the order-picking rows were used up, pallets from the center of the island were moved toward the outside. New stock went into the center of the pile to ensure first in, first out handling. But the trouble was getting into the middle. All the pallets had to be

Peaches and pineapples get to the grocery faster since pallet racks were used in stock-picking areas. Fresh shipments in pallet loads are lifted up to storage space; later the stock is brought down to racks used for order picking.

Stock Picking From Racks

Cuts

Waste
Motion



moved and restacked, and in proper order. Some pallets were being moved as many as five times.

Enter Storage Engineering

The storage engineers went to work. They put in rigid, box-type metal pallet racks. Each rack holds two pallet loads, one above the other. The goods on these pallets are for order-picking; two more pallet loads are stacked on top of the rack for extra storage.

With this idea and equipment the warehousing cycle is cut to just two operations: moving pallets from receiving dock to storage racks, and from the high storage position to the order-picking position directly below. Direct warehousing costs are cut 21 percent.

*Photograph and information
courtesy of Republic Steel Corporation*

B.F. Goodrich



New All-Purpose Pneumatic industrial tires cut your operating costs 4 ways!

THE first thing the driver of a materials handling truck notices when you change to B.F. Goodrich All-Purpose Pneumatic industrial tires is the smooth, comfortable ride—the sure, dependable traction! But *you'll* notice reduced operating costs because B.F. Goodrich All-Purpose tires:

1. Lower machine maintenance by protecting equipment.
2. Cut plant maintenance by protecting floors.
3. Reduce breakage by cushioning loads.
4. Mean more work per salary-dollar by reducing driver fatigue.

Specify B.F. Goodrich
tires when ordering
new equipment

The All-Purpose tread has hundreds of gripping edges that give positive traction in forward or reverse—on all hauling surfaces, indoors and outside. Husky shoulders and a continuous center rib wear slowly and evenly, give the All-Purpose greater stability under heavy loads.

FREE Analysis cuts costs up to 50%

The new B.F. Goodrich All-Purpose Pneumatic is just one in the only complete line of money-saving industrial

tires for every materials handling job. Picking the right tire for your work is the job of the B.F. Goodrich Tire and Wheel Analysis man. His unbiased recommendations can save you up to 50% on tire costs, up to 20% on maintenance costs. This B.F. Goodrich service is *free*—just mail the coupon. A consulting service is available to manufacturers of materials handling equipment.

B. F. Goodrich Tire Company
A Division of The B. F. Goodrich Co.
Department TW-671, Akron 18, Ohio

I would like further information on your
FREE TW Analysis.

NAME _____
COMPANY _____
STREET _____
CITY _____ STATE _____ ZONE _____



Circle No. 40 on Reader Service Card for more information

BEFORE YOU BUY ANY POWER SHIFTED LIFT TRUCK BE SURE YOU HAVE DRIVEN ONE WITH

FTC*

exclusive on the **NEW**

Power shift **HYSTAMATIC®**

*Feather Touch Control, an exclusive feature of the Power Shift Hystamatic transmission designed and built especially for Hyster lift trucks as optional equipment; produces an entirely new standard of lift truck driving ease and control of truck and load. Result: More work done, lower handling costs.

AND HERE'S WHY:

Smoother Inching

Light touch of left foot controls travel speed while right foot simultaneously maintains high engine speed for lifting. Loads can be quickly lifted and stacked in one continuous motion.

Smoother Change of Direction

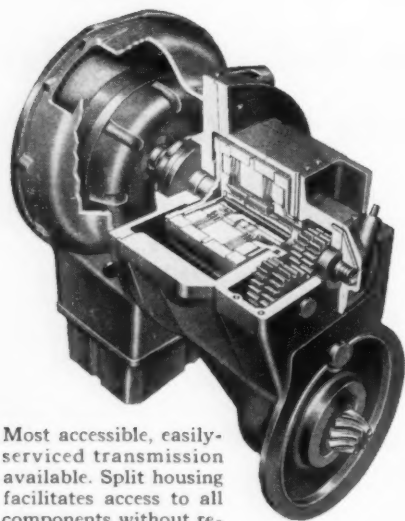
Simple flick of lever (left hand) controls forward-reverse. No sharp shifting surge to disturb load. Right hand is free to control hoist lever.

No Time Lag, Lively Acceleration

Operator has positive control of power and lively acceleration at all times.

Smoother Power

Torque Converter automatically adjusts power output to load. Smooth application of power eliminates jerky truck movement common to many other automatic transmissions.



Most accessible, easily-serviced transmission available. Split housing facilitates access to all components without removing unit from truck.

**Ask your Hyster dealer for a demonstration, or write Hyster
P.O. Box 847, Danville, Ill., for
descriptive brochure**



HYSTER®

Factories

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Nijmegen, The Netherlands • Sao Paulo, Brazil
Glasgow, Scotland • Sydney, Australia (licensee)



Circle No. 167 on Reader Service Card for more information

Guesswork about loads can mean accidents. It's safer if you

...

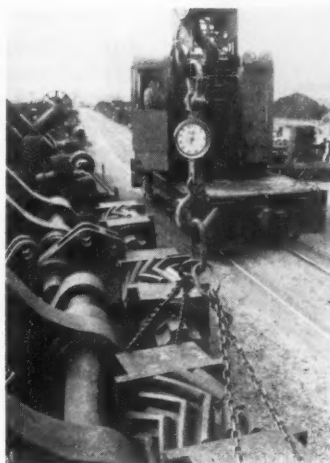
Weigh As You Handle

Handling and moving heavy, bulky loads in a plant can present a problem in safety. No matter how experienced an operator of material handling equipment is, a single mis-judgment of load weight on his part can mean a serious accident. The way to eliminate this possibility of human error is to substitute the operator's weight-guessing function with an automatic weighing device mounted on the equipment.

For example: A few years ago a worker selected a hoist to move some castings that had been stored in a container outdoors. He based his hoist selection on previous experience with the castings, not knowing that rainwater had accumulated in the container, doubling its weight. The hoist cable snapped and injured the worker.

A recent study has shown that plants are avoiding this kind of accident by installing dynamometers on handling equipment to provide an up-to-the-minute indication of load weight and tension. This device operates through the deflection of a high-alloy steel beam which requires only 0.040 inch overall movement to indicate a full-scale reading on the dial face.

The dynamometer is mounted in series: that is, as a part of the load-carrying member of the equipment. When the member to be load-checked (such as cable)

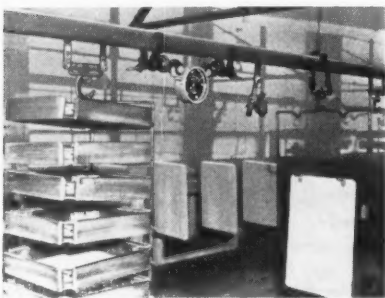


Castings are weighed with a dynamometer to minimize the danger of the crane overturning.

is long or hard to reach, the dynamometer can be placed anywhere along the member so that it will be in constant view of the operator.

Many times a load weight or tension is difficult to estimate because of hidden factors or variables. The mechanical dynamometer picks up these factors automatically and accurately; instead of guessing weight, the operator sees it—and stays safe.

Photographs and information courtesy of W. C. Dillion & Co.



By placing a dynamometer on a conveyor, you can check on any possible chain overload. It is not necessary to stop the conveyor's movement or loosen the chain to attach it.

G-W OSCILVEYOR

moves bulk materials



**quickly,
gently,
quietly!**

In the Oscilveyor three weights revolve in opposite directions to "blend" centrifugal forces and put *all* vibration to work. With this unique principle, you get faster forward motion of chips, shreds, pellets, and similar free-flowing material at the lowest possible cost for power and maintenance. Speed is adjustable.

Rubber-mounted rocker arms and closely calibrated coil springs make operation smooth, quiet. Rubber pad mounts need no lubrication or maintenance.

Other Oscilveyor features include:

- *No floor shock*, because all vibration is *localized* and rubber-insulated. No need for heavy floor mountings!
- *Reduced particle breakage*, because movement is *gentle*.
- *No spillage or leakage*, because forward movement is smooth, efficient, uniform.
- *Fast material flow* up to 50 ft. per minute, horizontal, incline, or decline.

Oscilveyor units can be assembled to any desired length. One drive unit powers 100 ft. Available custom-built for sanitary, ultra-abrasive, or high-heat handling. *Write for details.*

GIFFORD-WOOD CO.
HUDSON, N. Y.

Branches in

New York, Cleveland, Chicago, St. Louis

Makers of Conveying Systems and Equipment • Ice Handling Equipment
• Commercial Kitchen Machinery
• Eppenbach Homogenizers and Colloid Mills



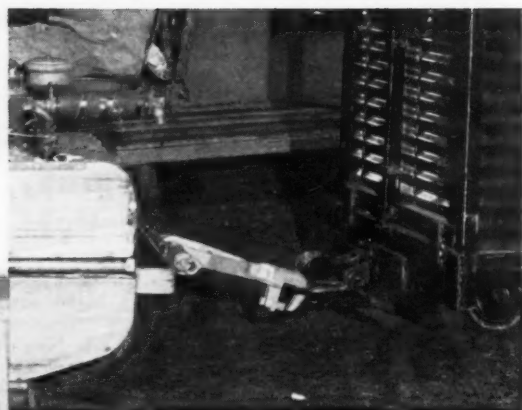
Gifford-Wood Co.
Hudson, N. Y.

Please send me complete details on the Oscilveyor, plus G-W's "Idea Book" on materials handling.

Name & Title _____
Company _____
Address _____
City _____ Zone _____ State _____

Circle 141 on Reader Service Card

You Needn't Junk That



SIMPLE TOW-HITCH (left) is only adaptation necessary to convert old sweeper into an acceptable tractor for many odd jobs such as towing stock trailers, parts trucks, carts, etc. Automobile manufacturer uses one of its sweepers to tow rubbish trailers (below).



If your old sweeper has . . .

1. A rugged, husky frame.
2. An engine which is in reasonably good condition.
3. Gears, clutches or drive mechanism which are in good enough shape to work efficiently under moderate loads.

You may be able to convert it into a . . .

- Fuel truck—for carrying gasoline, oil drums, tanks, etc.
- Rubbish carrier—For hauling ashes, trash, metal scrap, filings.
- Coffee wagon—For transporting coffee, doughnuts, soft drinks, cups, etc. to work areas in the plant.
- Maintenance cart—For carrying floor machines, brooms, ladders, paint.
- Fire fighter—For transporting fire extinguishers, water and sand buckets.

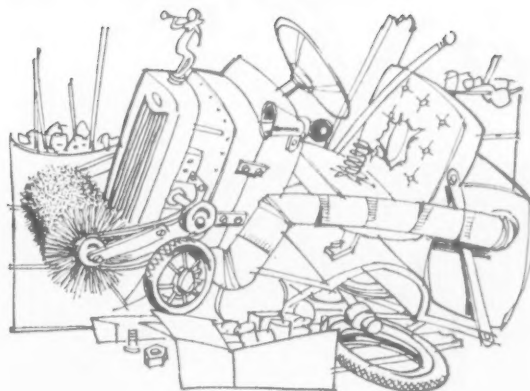
Old Sweeper

A few hours, a few dollars and a little work can save an old power sweeper from the junk pile—and maybe transform it into a useful handling tool for light jobs.

AT MANY companies, old sweepers have come out of retirement to haul rubbish, transport fuel, supplies and other equipment. They see service as plant fire fighters and coffee wagons. Plant inspectors and visitors save time and shoe leather as they are taxied around plants on converted sweepers.

Conversion is usually simple. One plant spent only seven dollars for materials and had one man change an old sweeper into a useful utility truck in less than 15 hours. In most cases the biggest job is replacing the dirt hopper with a wooden platform (usually made of 2 x 6's). It is a good idea to disconnect needless power-consuming drives, such as the fan and brush drives.

Here's how a typical old 36-inch sweeper can be changed to a useful plant carry-all: Remove (1) dirt hopper (2) vacuum fan, housing and fan shaft from engine (3) brush support arms. (Other parts may have to be removed, depending upon the age, type



and make of sweeper.) Add (1) Angle irons to bottom of frame (2) wooden platform or base (fastened to angle irons). A removable seat platform can be attached if the vehicle is to be used for inspections or plant tours. For special heavy-duty applications such as foundry cars and welding trucks, some frame reinforcement, additional wheels and tires and heavier platforms may be needed.

One company uses an old sweeper as a safety car for carrying emergency lights, warning barriers and supplementary first-aid equipment. Another has found that its old sweeper makes an ideal mount under company floats in parades. And a number of others have found that you can hitch a chain to an old sweeper and use it as a tow truck.

Photos courtesy G. H. Tennant Co.

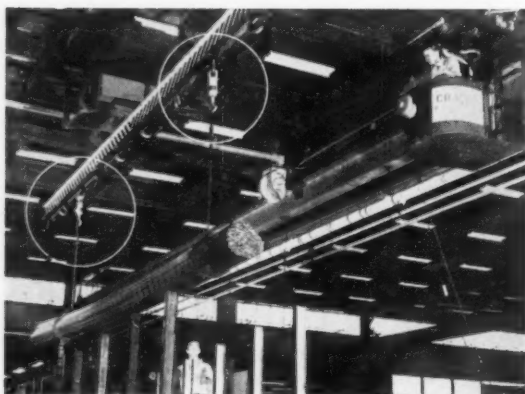


CONVERSION INTO CARRY-ALL gave this sweeper a new lease on life. Here, it transports a load of materials for a concrete patching job. Because of heavy loads handled, it was reinforced with double wheels.



REMOVABLE SEAT was added to converted sweeper so that it could be used as personnel carrier for plant tours and inspection trips. The front seat is easily taken off again when the unit is needed for hauling.

IDEAS **COST CUTTING**



Circle No. 274 on Reader Service Card for more information

WEIGHS PIPE WHILE MOVING IT

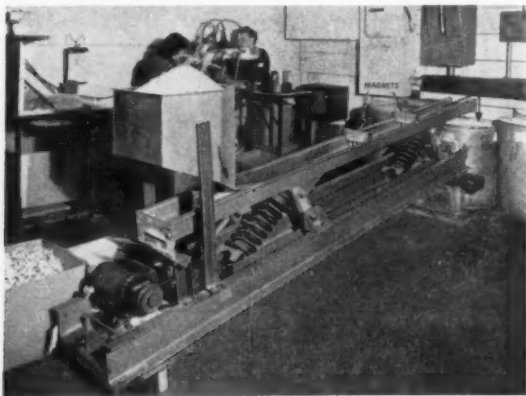
Scales built right into its overhead crane save more than 40 percent of the time used for weighing pipe for inventory control at the Ellenville, N. Y. plant of Channel Master Corp. The company fabricates aluminum tubes for television antennas and lawn furniture. Formerly, the crane moved bundles to platform scales for weighing in a separate operation. Under the new system, the operator lifts the bundle of tubing, and reads its weight on a scale dial in his cab, while moving directly to the next processing station. The two crane scales are attached to hooks on the crane boom by their top rings, and inventory control records are taken while the materials are moved.

TAPE FOR PALLETIZED LOADS

Palletizing 18 cartons, each containing 80 pounds of paper, is achieved by a New York paper manufacturer through the use of glass fibre-reinforced pressure-sensitive tape. Taping the pallet loads involves merely passing a single band of 1-inch tape around each of the two tiers of cartons. Tests proved that it was unnecessary to band the cartons to the pallet. The palletized cartons are shipped by truck; 324 cartons tiered two-high constitute a truckload. Until recently, cartons were shipped loose. A fork truck brought a loaded pallet to the street truck, where the driver and at least two others required two hours to load by hand. Now one driver does the job in half an hour.



Circle No. 275 on Reader Service Card for more information



Circle No. 276 on Reader Service Card for more information

SEPARATES STEEL FROM PLASTIC

A vibrating conveyor serves an unusual function for the Lemac Company, Los Angeles, Calif. One of the firm's products is a plastic spray nozzle with stainless steel ball valve. On defective units, it is necessary to separate the ball from the plastic, so the plastic can be reclaimed. The defective units are first crushed to release the ball, then the mixture of broken plastic and balls is fed onto an inclined vibrating conveyor. As the crushed parts move along the conveyor, magnets suspended over the trough pick up the steel balls which have been broken in the crusher. Those balls which are still intact roll backward into a container at the feed end of the trough.

LORAIN SP-107

*It's just what you need
around your yard*



Armco Drainage & Metal Products, Inc., Denver, Colorado, has learned what more and more companies are saying about the new 7-ton Lorain SP-107 yard crane as they find out how it can cut yard handling costs.

High-speed, agile mobility is one of the big features of the SP-107 that appeals to users. The SP-107's choice of 3 or 6 travel speeds, up to 15 m.p.h., applied through a smooth, automatic transmission and torque converter, enables this Lorain to bustle around the yard to handle all kinds of lifts where and when needed.

The SP-107's 4-wheel steer permits shorter turning radii—even "crabbing" sideways—for maximum maneuverability in and out of aisles or to "snuggle up" to a stockpile. The main illustration shows how the SP-107 maneuvers in close quarters, as it unloads and stockpiles multiple lengths of corrugated drainage pipe with a special sling.

No time-consuming outriggers need be set, as the close-coupled, 8-ft. long, 8-ft. wide, "square" design of the carrier gives you the full-rated lifting capacities "on rubber" throughout the 360° swing. And independent travel—that provides simultaneous hoist, swing and travel—saves additional operating time, as loads can be lifted, swung over the front end and the carrier started on its way, all in one smooth, simultaneous operation.

The SP-107 has a great many more advantages. It's really an entirely new concept in yard cranes.

Ask your Thew-Lorain Distributor to demonstrate this agile, low-cost, materials handling crane.

THE THEW SHOVEL CO., LORAIN, OHIO, U.S.A.

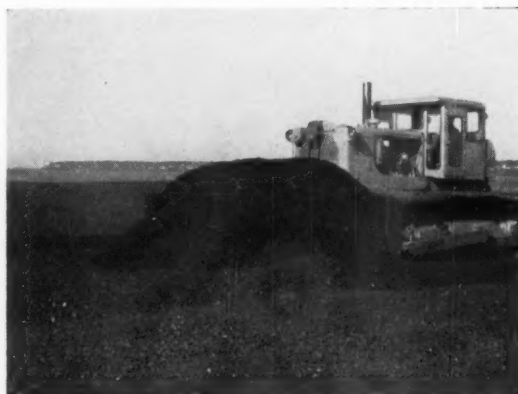


IDEAS COST CUTTING



PUSHES 20-TON LOAD

A new machine, said to be the world's largest tractor, has made it possible for the B. C. Cobb plant of Consumers Power Co., Muskegon, Mich. to move huge loads of coal on its stockpile. The big crawler, equipped with a 20 ft. U-blade, can push an average load of 19 to 20 tons. The tractor dozes coal to within reach of a reclaiming crane, which deposits it onto a yard belt. Occasionally, when there is an emergency, the tractor dozes the coal directly into an underground hopper that leads directly to the breaker house. From there, it passes through a hammermill that crushes it to a predetermined screen size, and then into the plant to be pulverized and blown into the boilers.



Circle No. 277 on Reader Service Card for more information



CUTS DAMAGE IN LUMBER HANDLING

Through the use of a relatively new type of woven wire sling, the Weyerhaeuser Timber Company has been able to reduce damage to almost nothing in handling bundled lumber. At the same time, the sling also increases safety of loading docks. Because of its woven wire construction, the sling provides a broad, flat surface that fits snugly around the corners of the load during lifting, thus eliminating the cutting action at the corners. The lumber was formerly handled with wire rope or chain slings, with the result that the bottom members were almost always cut into and ruined. The sling cannot snap suddenly, and thus eliminates the danger of damage to the men or load.

Circle No. 278 on Reader Service Card for more information

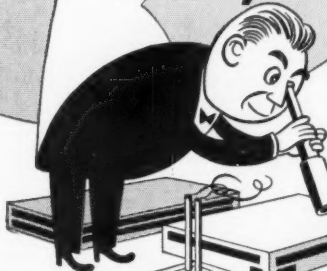
FORK TRUCK SERVES AS SNOWPLOW

Lift trucks can be put to any number of bonus uses by enterprising users. A seasonal example is conversion to a snowplow. Coleman Builders Supply, Inc., Pocatello, Idaho, uses its 4000 pound capacity industrial lift truck to keep its yard clear of snow. The company's needs did not justify the purchase of special snow removal equipment, so they turned to the lift truck as a handy means of solving the problem. A piece of ordinary plywood is secured to the front of a pallet, and is placed on the truck's forks. The company uses a load of thick-butt shingles as a weight, to hold the pallet firmly in position. According to reports, it does a first-class job of removing the snow.



Circle No. 279 on Reader Service Card for more information

How About Your INNER Space?



CONSULT

P-S
FOR THE BEST

THERE'S no money to be made yet in outer space, but companies that make inefficient use of valuable inner warehouse space lose many dollars that could be theirs. That's why MORE and more WAREHOUSES are USING the new adjustable storage racks engineered and manufactured by PALMER-SHILE.

**YOU STORE MORE MERCHANDISE
IN LESS WAREHOUSE SPACE and
SAVE MONEY WHEN YOU USE . . .**

POWERFULLY STRONG

Item No.
C-1361

Adjustable

STORAGE RACKS

Simple and Easy to Assemble

- **NO BOLTING**
- **NO WELDING**
- **NO SMALL PARTS**

P-S racks give you a complete tiering range to any height and width in an area of any size, in single, double or multiple sections. Built to your specifications to handle any load per shelf.

Start now on the path to more inner space savings. Consult Palmer-Shile on adjustable storage racks to meet your individual warehouse requirements.

Use all your
INNER space

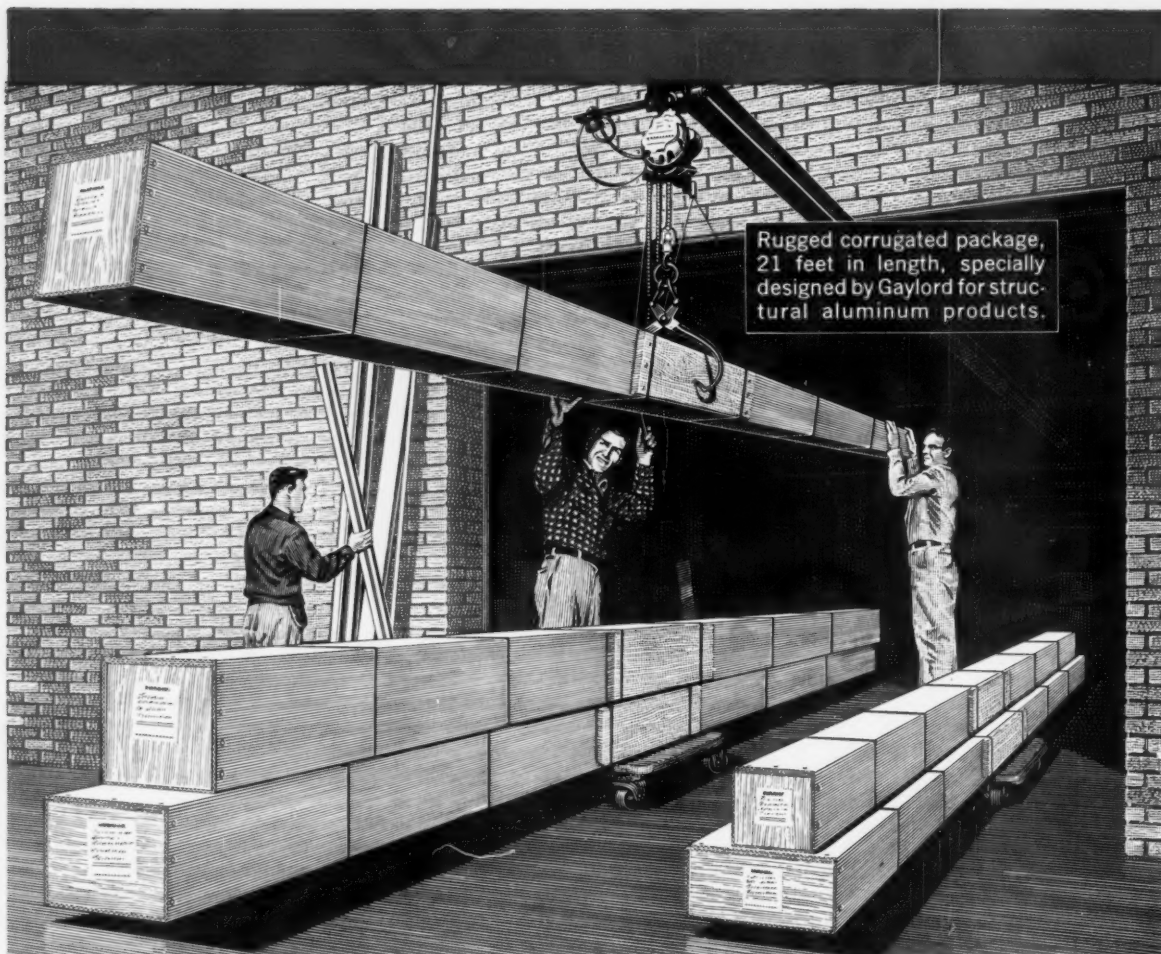
DESIGNED AND MANUFACTURED BY

Palmer Shile Co.
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126 Dartmouth St., BOSTON 16, Mass., Commonwealth 6-0570 • 1209 Burlingame Ave., BURLINGAME, Calif., Diamond 2-0823 • 15 South Austin Blvd., CHICAGO 44, ILL., Austin 7-8599 • 857 Leader Bldg., CLEVELAND 14, Ohio, Superior 1-3235 • 2855 W. Eighth Ave., DENVER, Colo., Alpine 5-3984 • 202 Genesee Bank Bldg., FLINT, Michigan, CEder 8-6881 • 2609 S. Broadway, FORT WAYNE, Indiana, KEmore 5408 • 1224 No. Capitol Ave., INDIANAPOLIS 2, Indiana, MEtro 5-2587 • 6440 Fleet St., LOS ANGELES 22, Calif., RAYmond 3-3733 • 647 W. Virginia St., MILWAUKEE 4, Wis., Broadway 1-9860 • 5107 Columbia Ave., ST. LOUIS 9, Mo., FRospect 1-1474 • 199 Main St., WHITE PLAINS, N. Y., White Plains 6-1354.

Stock on slides is readily accessible for easy selection

Racks made for economical use of floor to ceiling space



CHEAPER FOR THE "LONG HAUL"



For the long or short of it, whatever your packaging needs, put Gaylord engineering ingenuity to work for you.

This manufacturer, for example, reduced costs three ways with Gaylord-designed corrugated shippers. Initial cost is lower than former packaging; one-step packing operation saves time; reduced tare weight saves shipping charges.

Call your nearby Gaylord engineer. He's backed by the finest packaging experience and research facilities in the industry.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

DIVISION OF **Crown Zellerbach Corporation**



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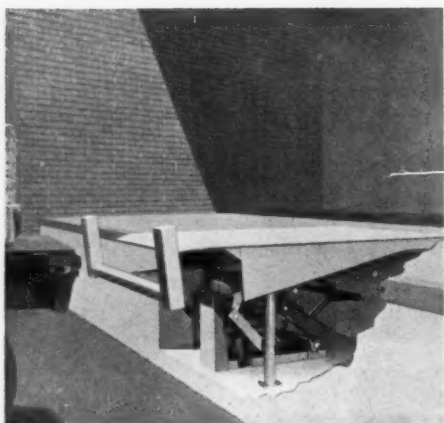


PACKAGING AND

SHIPPING SECTION

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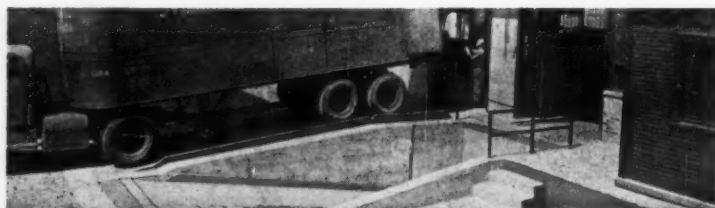


COUNTERBALANCED dock leveler uses no power; employs springs (above) or weights.



A New Look

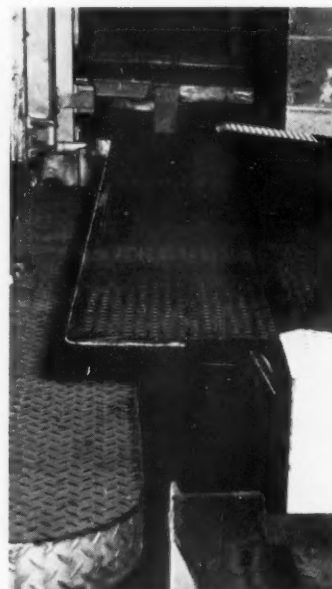
DOCK LEVELERS IN A ROW are the new look on today's loading docks. Small or large plants profit from their use.



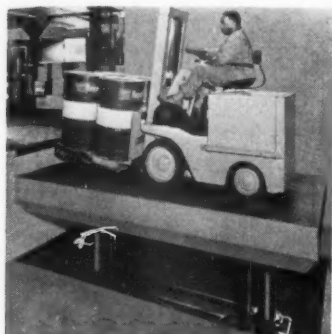
TRUCK LEVELER adjusts the height of the trailer to the dock instead of vice versa. The rear wheels rest on a platform that moves up and down.



HYDRAULIC DOCK LEVELERS, like counterbalanced, can be built into any type of dock. There are some models that do not require excavation.



RETRACTABLE LIP on some models can extend into the trailer bed.



NO DOCK IS NEEDED with hydraulic lift put in at ground level.

in Mechanized Dock Handling

by
Jack E. Burch*

Mechanized dock levelers are a common link between handling and shipping, breaking the bottleneck on America's loading docks.

MERCHANDISE passes across America's loading docks today at a rate that would have left handling men pulling their hair ten years ago. Experts figure that the average loading dock today handles about 200 percent more goods than it did at the end of World War II.¹

By now it's well known how material handling engineers set themselves to the task of bringing in-plant handling methods up to date in the early postwar years. But that's only half the story—the inside half. Just as dramatic was the development of a carrier system that could get the goods to consignee as fast as they could be produced.

But as the carrier system grew, so did another problem: there was no uniformity of dock height and vehicle height. That's where dock levelers came in to link in-plant handling and shipping. Without them the nation's loading docks would pose a collective bottleneck that would paralyze freight handling. The difference in height between dock and vehicle would be a stumbling block to mechanized handling.

There have been brave attempts to standardize dock and vehicle heights, but there are too many variables preventing any degree of uniformity. Vehicle heights change with the weight of the load. And many docks were built long before anyone had given much thought to uniformity.

Before World War II, loads were usually moved in and out manually, or by hand truck. The only goods handled mechanically were those that were too heavy

to be moved manually. Simple flat steel plates were all that were used to span the gap between dock and vehicle. But with more and more companies using powered equipment, unit loads of 1000 and 2000 pounds, or larger, became the rule rather than the exception. Soon the flat plates were becoming so unwieldy that workers couldn't position them by hand.

That led to the development of the manual dockboard. This important equipment does the same job as the early flat plate, but with refinements. There have been such improvements as lighter materials, curbs, treads, and many other important safety features.

The next development was in equipment to bring dock and truck bed level with each other. These devices fall into two categories: 1. Those that level the truck bed with the loading dock; and 2. Those that level the dock with the truck.

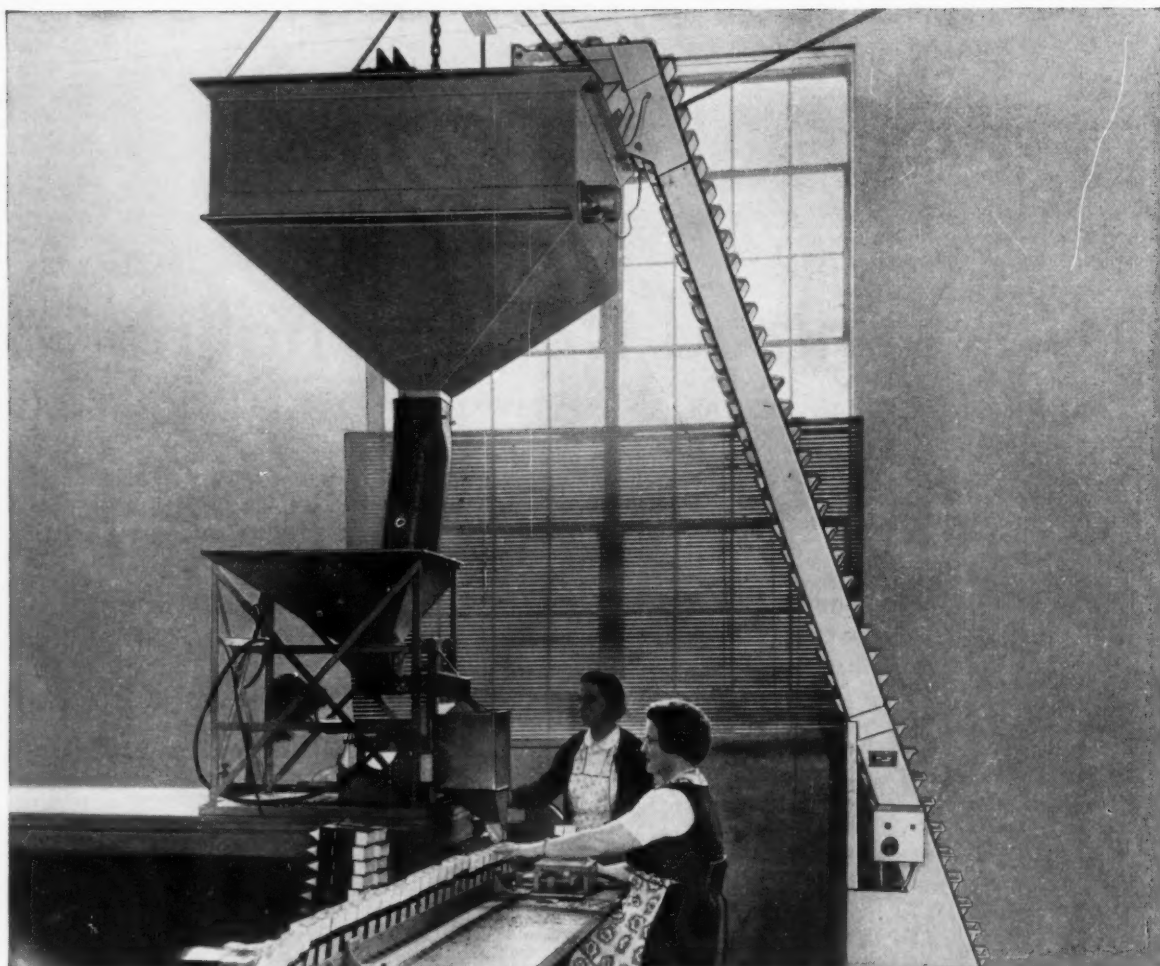
The truck leveler is relatively new. The truck's rear wheels rest on a platform, which can be raised or lowered to bring the trailer bed to the level of the dock. Many companies are very enthusiastic about this type of equipment.

The second type, in its simplest form consists of our old friend, the flat plate. It is recessed into the deck and hinged at the back so that its lip rests on the carrier bed. Change the simple plate to a treaded deck for greater safety, throw in some provision to raise and lower mechanically and you have the basic dock leveler as it exists today. Of course, as with manual dockboards there are a lot of refinements, and a lot of variations to the basic theme.

To the user, the greatest single difference between

(Continued on page 112)

¹The Automobile Manufacturers Association's Motor Truck Facts (1957 Edition) states that the nation's trucking facilities handled almost 400 percent more ton miles of cargo in 1956 than in 1945.



ROBO-LIFT MOVES MATERIALS UP-AND-OVER AT LESS COST!

Wherever bulk materials must travel up from one processing step and over to the next, it will pay you to consider the Lynch Robo-Lift. It saves time, manpower, and money because it does the entire job *automatically*, with no costly rehandling. Robo-Lift's clean, gentle, filling-without-scooping action handles food, drugs, chemicals, hardware (and just about everything!). It can't crush or contaminate materials, will not spill them, will not leak. Each installation is custom-designed to work with existing processing and packaging equipment. New folder "Up and Over" gives full facts. Write for it today.

ROBO-LIFT BUCKET ELEVATING CONVEYORS

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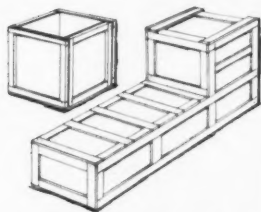


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ROBO**
CORPORATION

A division of
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Anderson, Indiana

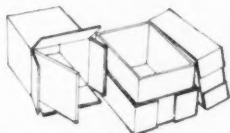
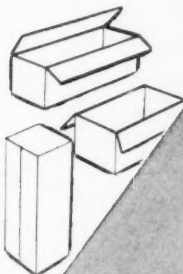
PLY-VENEER®

reduces weight
saves cost in...



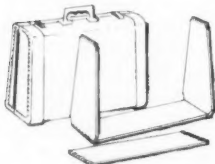
CLEATED CONTAINERS of all sizes whether for delicate recorders or bulky 780 lb. copy cameras.

CLEATLESS CONTAINERS for food products, chemicals, instruments and items requiring rigid, lightweight protection.



CONTAINER PARTS such as liners, sleeves, separators, corner protectors where strength is important.

LUGGAGE component parts for suitcases, trunks, foot lockers and carrying cases of many kinds.



CORE DISTENSION
INCREASES DIMENSIONAL
STABILITY—MINIMIZES WARPAGE

Weyerhaeuser's

PLY-VENEER®

...a tough, versatile
kraft covered
veneer sandwich!

Here is a new low cost, laminated panel stock of dependable Weyerhaeuser quality. It is designed to replace heavier and more costly materials in a variety of packaging and product applications. Basic ingredients of Ply-Veneer consist of structurally strong Douglas fir veneer overlaid on each face with smooth, tough kraft, light tan or white, linerboard.

Ply-Veneer has a high strength-weight ratio combined with remarkable stiffness and puncture resistance. This qualifies it as an excellent material for an infinite number of industrial packaging, container part and manufacturing applications. It may be die-cut, routed for right angle folds or bent with standard tools and equipment. Its smooth kraft surfaces imprint, silk screen or grain print beautifully.

For your cost-saving application, buy quality Ply-Veneer. Available in nine basic constructions using 1/10", 1/8" or 3/16" veneer thickness plus four specialty types.

WEYERHAEUSER

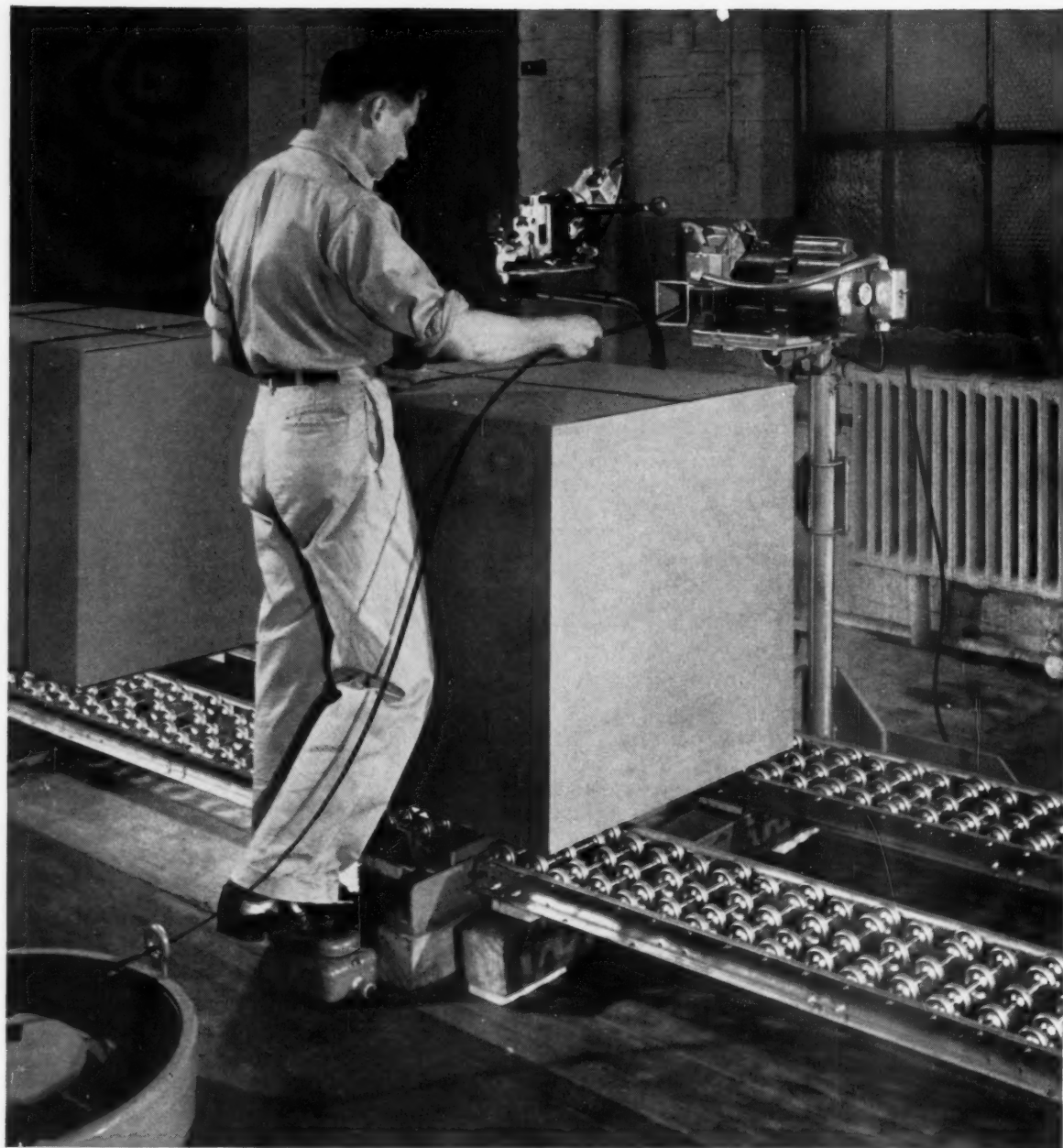
4-SQUARE

PLY-VENEER®

Write today for literature and samples

WEYERHAEUSER SALES COMPANY
Special Products Division • Tacoma 1, Wash.

Circle No. 110 on Reader Service Card for more information



NOW ...one man straps big packages fast with new Signode power strap feeder

Another "stand and wait" job hits the skids! Now, for the first time, one man straps big packages without a helper and without walking around the package.

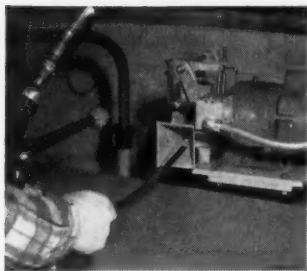
The new Signode power strap feeder applies 200 or more straps per hour to big packages. Only eight to ten seconds are needed to apply one strap to the container above. The speed limitation now is moving the packages into and out of the strapping station.

Cost of the equipment is modest; yet, it can handle a

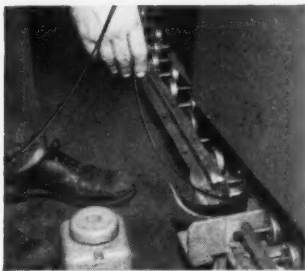
wide range of package shapes and sizes. Components are shipped ready for assembly by the customer, tailored to his needs. The equipment will handle any one size of strapping—from $\frac{5}{16}$ " x .012" through $\frac{3}{4}$ " x .035", plain or curved edge, blued, painted, coated, dry or waxed. Adjustment for changing strap size is simple.

The PSF-1 Power Strap Feeder is extremely versatile in use. It can be inserted into almost any conveyor system or set up in a separate strapping station for unitizing.

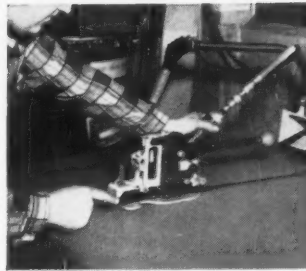
simple as **A, B, C!**



A. Feed the end of the strap into the motorized feeder and press the foot button. The strap goes down behind the package and comes underneath in the strap chute sections.



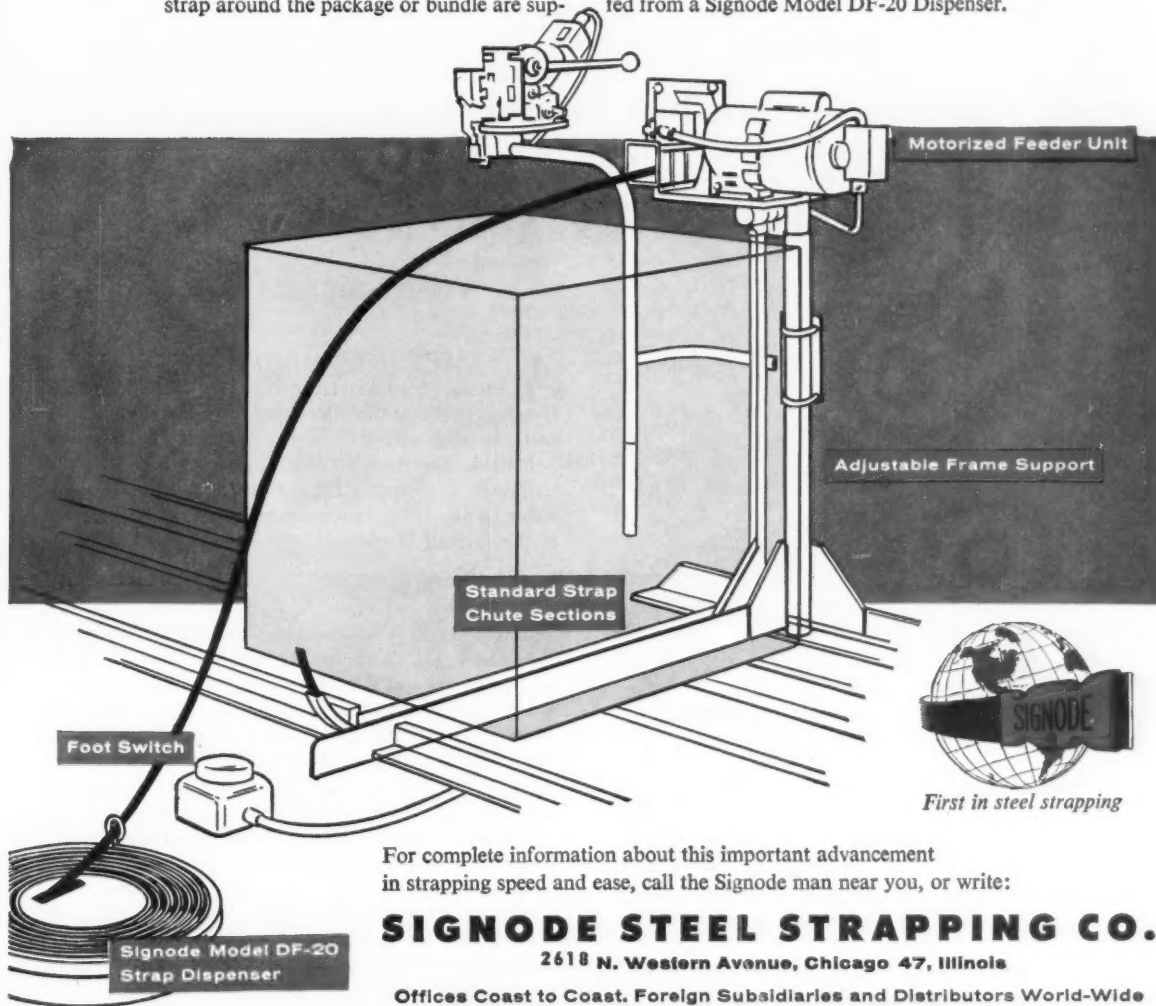
B. Take the end of the strap as it is fed upward at the front of the package or bundle. Release the foot button. Bring the strap up to strapping position.



C. Releasing the foot button automatically ejects the strap from the feeder. The strap is now ready for tensioning and sealing in the Signode strapping tool.

The strap feeder unit of Signode's new Model PSF-1 Power Strap Feeder is a quarter horse-power motor controlled by a foot switch. Strap chute sections as needed to feed the strap around the package or bundle are sup-

plied. Strap may be fed either down or up. The strap feeder can be used with any Signode seal feed tool—hand, pneumatic or electric—mounted in a tool balancer. The strapping is fed from a Signode Model DF-20 Dispenser.



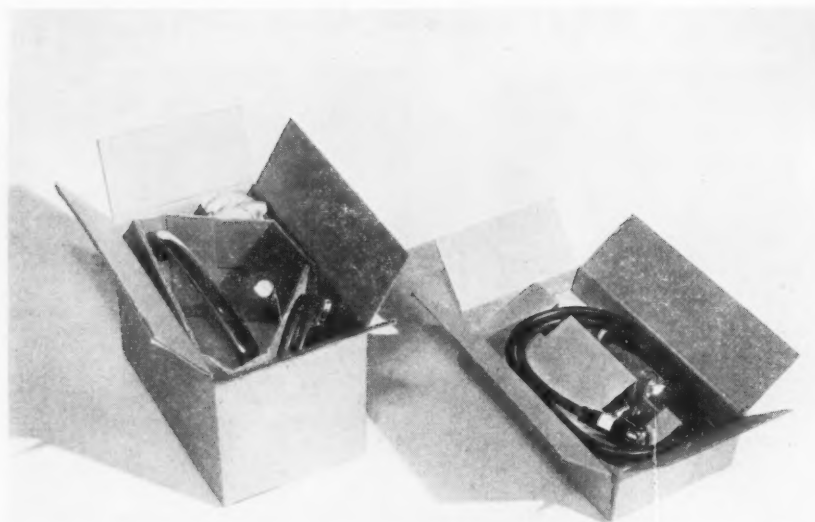
For complete information about this important advancement in strapping speed and ease, call the Signode man near you, or write:

SIGNODE STEEL STRAPPING CO.

2618 N. Western Avenue, Chicago 47, Illinois

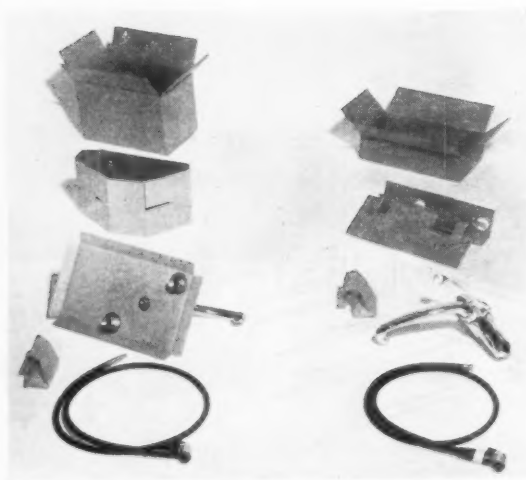
Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

Circle No. 92 on Reader Service Card for more information



Modern package for modern hardware . . .

Simple Design Cuts Carton Costs



OLD AND NEW CARTONS are shown side by side (both photos) with the old on the left, new on the right. Note the difference in height, number of parts making up the package, and the handling involved in packing.

Courtesy of Mead Board Sales, Inc.

A SNAPPY NEW CARTON is saving so much money for American-Standard Plumbing and Heating Division that the company's packaging engineers wonder why they didn't switch to it long ago.

It holds American-Standard's new single-lever kitchen faucet, a gleaming fixture that mixes hot and cold water to any temperature, from full force to a trickle, at the flick of Madam Housewife's finger.

Check these savings:

40 percent reduction in material costs. The new carton is only 3½ inches deep, reduced from 8 inches. One pad holds the faucet as securely as the old die-cut board tray and 35-inch protective collar liner.

20 percent faster packaging. The faucet had to be screwed to the old carton. Now all parts are held in place by the one protective pad.

50 percent less storage space. Reduced height permits twice as much storage in the same space.

40 percent smaller master shipping carton, and corresponding savings in carrier space.

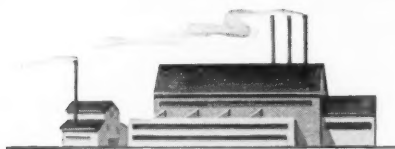
Easier stacking. The old carton was top-heavy; stacks tended to tip, causing expensive damage and delays. The new container ended this nuisance.

Cheaper and easier handling. Because the cartons are smaller, it takes less equipment to handle them.



Brainard Strap...

"All Over The Map"



WAREHOUSES

Strategically placed throughout the United States and Canada, insure quick delivery of tensional and heavy duty strapping as well as tools and other strapping supplies.



POWER TOOLS

For stretching and cutting both heavy duty and tensional strapping, the latest development in modern production strapping.



QUALITY STRAPPING

As a division of Sharon Steel, Brainard's integrated production insures a constant supply of high quality, heavy duty and tensional strapping in all standard sizes and gauges.

Brainard's Steel Strapping is more than a product, it is a system of specifically designed tools and accessories for the most modern of packaging and material handling. Brainard's Strapping service is available throughout the United States and Canada.

Brainard Steel Strapping

Brainard Steel Division, Sharon Steel Corporation
Larchmont Avenue, Warren, Ohio

SHARONSTEEL

569

BRAINARD STEEL STRAPPING DIVISION
WARREN OHIO

Please send me more information about
BRAINARD Steel Strapping.

NAME _____

COMPANY _____

ADDRESS _____

TITLE _____

Circle No. 155 on Reader Service Card for more information



FOUR STRAPS unitize a cube of 536 bricks into palletless load. Then operator turns and works on cube behind him. Operator stacks and straps 20,000 bricks a day.

Strapping System Stresses Savings

**\$100,000 a year saved by
strapping unit loads of brick**

A SLICK NEW WAY of handling and packaging brick saves \$100,000 a year for the Kelsey-Ferguson Brick Company, East Windsor Hill, Conn. One of the first companies to package brick on a large scale, K-F unitizes its whole output—100,000 bricks a day.

Old method: Bricks were taken from the kiln by fork-type crane, and piled on the floor next to a row of stacking jigs. Here a crew of stackers formed cubes of 343 bricks, in patterns with two slots on the bottom for palletless handling by fork lift. The stackers were followed by a strapping operator, and his helper, who unitized the cube with five steel straps.

Since there were no side walls on the stacking jigs, even the most careful stacking produced loads that tended to be somewhat loose and uneven. That would often cause the cubes to settle during shipment, and loosen the straps.

New method: 1. Strapping suppliers designed a new type of stacking and strapping jig. It has both a side wall and a back wall, ensuring solid, smooth-sided cubes. It also has strap chutes to feed the straps around the cube. That was formerly the helper's job; he is now eliminated.

2. Strapping stations were moved to a spot directly alongside a track leading from the kiln. Bricks now move along these tracks on cars, directly from the kiln into the strapping jig. That did away with the crane handling operation.

3. Methods engineers specified platforms of exactly the right height, so that stackers can tong the bricks from kiln car to strapping jig with a minimum of effort.

4. Pairs of strapping jigs face one another, with operator and strapping tool between them. An operator stacks the cube, straps it, then turns around and does the same in the opposite jig. A fork truck removes the

(Continued on page 111)



FORK TRUCK takes completed cube from strapping jig. Straps hold the load firm while in transit.

*Photos and data courtesy of
Signode Steel Strapping Co.*

Stapling slashes costs, solves tough shipping and packaging problems for food industry

All industries have fastening problems, but they're especially critical in the food field. That's why you'll find Bostitch stapling so widely used by growers, packers and retailers.

Stapling's speed helps move perishables to market fast—for top prices. It cuts costs to safeguard profits. Staples are strong and sure. They withstand moisture and changes in temperature. 800 Bostitch staplers and 200 sizes and types of staples meet a wide range of fastening requirements.

You may need a fastening method that offers these benefits. Chances are good that Bostitch stapling can help you. One of the 400 Bostitch Economy Men, who work out of 123 U.S. and Canadian cities, will gladly investigate. He's listed under "Bostitch" in your phone directory—or send us the coupon.



Stapling lettuce cartons in the field is 3 times faster than wire binding—quick adjust knob sets stapler for varying board thicknesses or bulging contents.



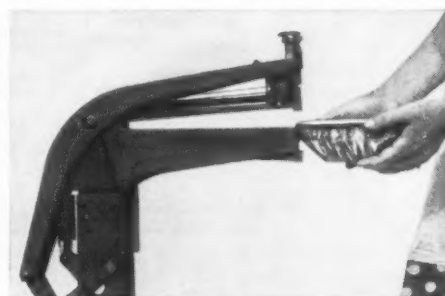
Leading meat packer finds stapling cartons 33 1/3% faster than nailing wooden boxes. Increases production while cutting labor and material costs.



Stapling beats hand tying 2 to 1 sealing grapefruit bags at citrus grove. The special forked blade speeds fastening of mesh and cloth bag drawstrings.



50 pounds of refrigerated live lobsters go in this stapled corrugated container. Stapling provides a more secure seal when boxes get wet and is faster than tape formerly used.



Stapling covers to plates for frozen pies. Staples withstand extremes of cold and moisture—pies arrive in perfect condition.

Fasten it better and faster with



Bostitch, 702 Briggs Drive, East Greenwich, Rhode Island

☐ Please send me information on stapling in the food field. I'm especially interested in stapling for _____

☐ Please send free bulletins on ways stapling cuts costs for other businesses.

I want to fasten: ☐ corrugated board ☐ leather ☐ roofing ☐ cartons ☐ plastic bags ☐ rubber ☐ fabric ☐ wood ☐ light metals

Name _____

Company _____

Address _____

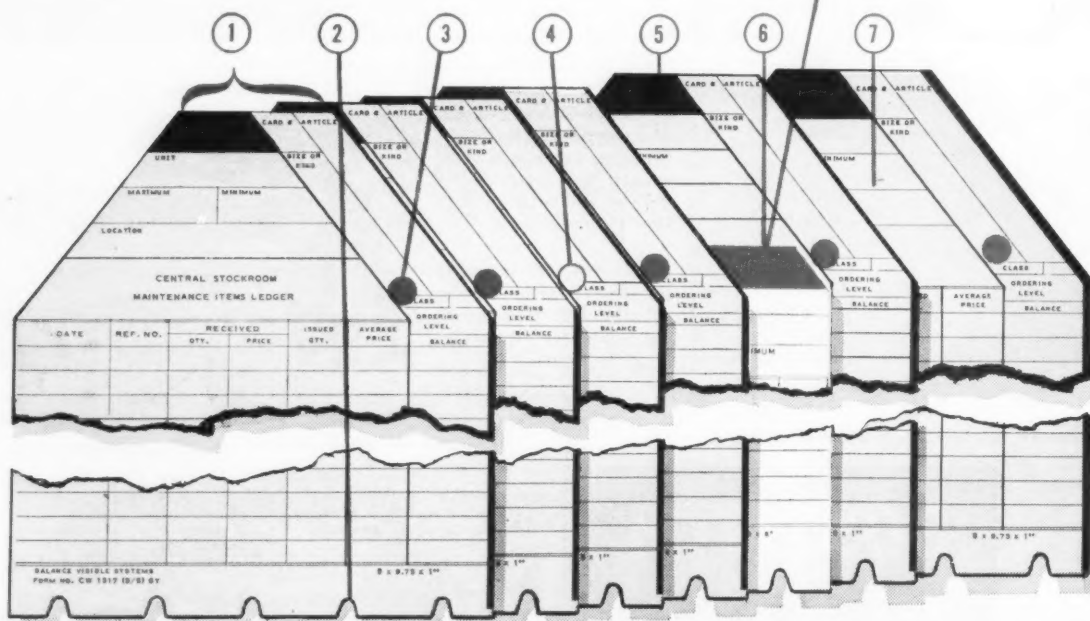
City _____ Zone _____ State _____

Circle No. 88 on Reader Service Card for more information

by
John Hockman

The reorder card (above) is pulled out and sent to

There is one other convenient feature: the color band across the top of the ledger card (5). It warns when any ledger card is missing. When all the cards are in place this band is covered up. When any card is removed, the color band on the card below glares up a caution signal to the user. If both the ledger and recorder cards are removed, twice the normal space on the next ledger card is exposed (7).





Know your AIM*...Indian Head Mills, Inc. does...

Steel Strapping Machine closes textile boxes

INDIAN HEAD MILLS, INC., Cheraw, South Carolina, uses an Acme Steel Model F1 Semi-Automatic Strapping Machine to close and reinforce boxes of their well-known, quality, "Indian Head" brand textiles. Now, only one man is required for the strapping operation... a saving of 8 to 12 man hours per day. (Idea No. S5-5)

Served by a conveyor system, the F1 applies as many steel straps as desired in a matter of seconds with uniform, pre-determined tension. Electrically powered, the machine is controlled by push-buttons. Strap is cut automatically, and ends are instantly and permanently joined by spot welds. The machine handles containers of various sizes in any sequence without adjustment. A special track feeds the strap to within easy operator reach.

***Know your Acme Idea Man.** He is sure to provide clues to better ways of protecting and shipping your products. Call him today at a nearby Acme Steel office. Or write Dept. **FDS-28**, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Ltd., 743 Warden Ave., Toronto 13, Ontario.



Acme Idea Man
J. B. Quarles
cooperated with
Indian Head Mills, Inc.
on this modern
installation.



STEEL STRAPPING

Circle No. 2 on Reader Service Card for more information



Knock-Down Container Is the Last Word in Storage

THERE HAVEN'T BEEN MANY CHANGES in moving and storage since trucks replaced horses—at least until now. But a plywood crate is making plenty of changes on the West Coast.

The crate's six sides are held together by wire clips. No nails, no screws. With the clips in place the plywood sides form a sturdy, palletized load. When they are removed, the sides come apart to be stored flat.

Bonus Storage

Stan's Vans, an Oakland moving and storage firm, was one of the first to use these new containers. Proprietor John Stanek says that they have tripled the amount of merchandise he can store in his 5000 square foot warehouse.

A crew going out on a job, takes along a number of knocked-down crates on a flat-bed semi-trailer. Movers stack the furnishings on the plywood section that makes up the crate floor. This section stays on the truck bed. After loading, they put up the sides, tap on the wire clips that hold them in place, secure the top in the same way, and the crate is completed.

They repeat these steps with as many crates as needed to complete the job, then take them to the warehouse with no further handling. Once at the warehouse it's a simple job for a fork truck to lift the crates of the trailer, and stack them two high.

Other Advantages

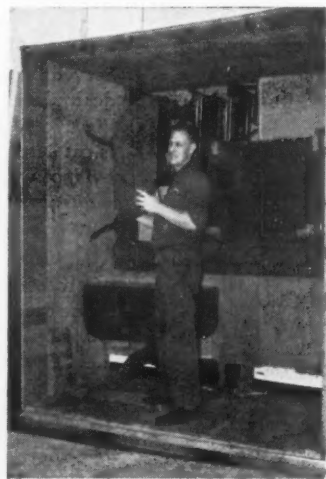
Space gained isn't the only advantage. The company figures a crew can handle its loads 60 percent faster by this method. Once a customer's goods have been crated and the cover sealed, there is practically no chance of loss or pilferage. Contents remain safe and clean. And they are as easy to take out of storage as they were to put in.

The crates can be made in any size or shape, to suit all kinds of loads.

Courtesy of Douglas Fir Plywood Association.



PLYWOOD CRATES hold loads of furniture for moving and storage. A fork truck stacks them two high (upper photo) in the warehouse. The six separate sides are held together by wire clips that are put on and taken off quickly and easily (lower photo) with hand tools.



SECTIONS are built around the load on the truck bed right at the job. Goods stay safe and clean. Note palletized bottom section.

Circle 128 on Reader Service Card for more information

ARROW TACKERS

**FASTER, EASIER, NEATER,
MORE EFFICIENT**



No. HT-50

TAGS AND LABELS ARE ATTACHED IN A JIFFY.

BOTH MACHINES STAPLES:
T-50: up to 9/16" leg
HT-50: up to 1/2" leg



No. T-50

HANDY FOR FASTENING PROTECTIVE LININGS AND PADDINGS IN CLOSE CORNERS.

SOLD AT HARDWARE, BUILDING, LUMBER DEALERS AND INDUSTRIAL TOOL SUPPLIERS.
WRITE FOR CATALOG

ARROW FASTENER CO., INC.
ONE JUNIUS STREET, BROOKLYN 12, N. Y.

**ELIMINATE HEAT LOSS...
CUT FUEL COSTS WITH**

FROMMELT DOCK SHELTERS



LOSING HEAT?

CAR-DOX GIVES YOU AUTOMATIC PROTECTION IN SECONDS

Frommelt all-weather dock shelters cut heat (or refrigeration) losses to a minimum... save fuel... maintain constant temperatures at and around shipping doors. Users report less than 5° temperature variation even under the most adverse weather conditions. Car-Dox operate auto-

matically... provide a snug, draft-free enclosure between car and building. Steel frame operates smoothly... UL approved fabrics are fire, water, mildew resistant. Custom-built to fit any rail, truck dock.

WRITE FOR FREE CATALOG
Prices, fabric samples on request.



FROMMELT INDUSTRIES
DUBUQUE, IOWA

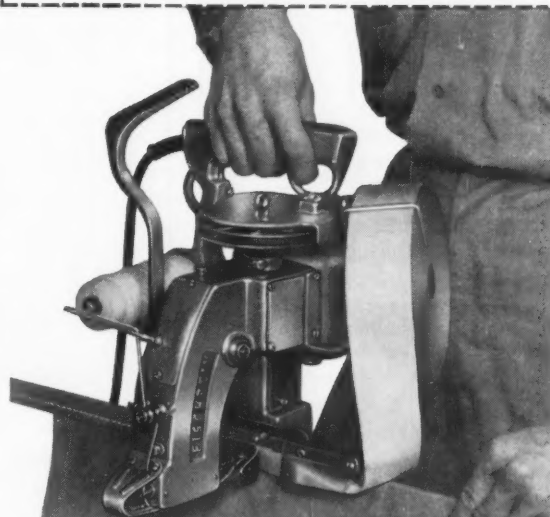
The Name To Remember For Approved Safety Products

Circle 147 on Reader Service Card for more information
FEBRUARY, 1958

NOW!

TAPE-BOUND CLOSURES

with the
**FISCHBEIN Portable
BAG CLOSER**



FISCHBEIN **FASEAL** TAPE BINDING ATTACHMENT

- Perfect tape-bound closures
- Complete portability maintained
- Quickly removed when tape binding is not required
- Simple! Versatile! Economical!

FOR DETAILS and complete CATALOG FILE of FISCHBEIN BAG CLOSING EQUIPMENT, mail coupon to:



DAVE FISCHBEIN CO., DEPT. 4B
2720 30th Avenue South, Minneapolis 6, Minn.

Name _____

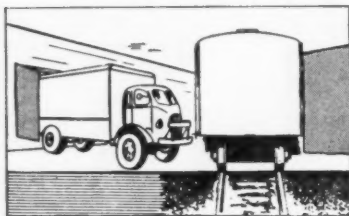
Firm Name _____

Address _____

Circle 118 on Reader Service Card for more information

does your loading dock LEAK MONEY?

IT DOES IF IT'S NOT
PROTECTED BY A
DAZZO LOADING
DOCK-DOOR SHELTER!



HERE'S WHY—

A Dazzo retractable loading dock-door shelter provides a safe, dry, draft-free passageway between the door of your building and the door of the freight car or truck. This saves you important money these four ways:

- 1 It prevents spoilage and damage.
- 2 It cuts heating cost and improves working conditions by sealing off drafts.
- 3 It lowers compensation insurance rates by preventing slipping and accidents.
- 4 It saves man hours by speeding loading regardless of weather and by cutting absenteeism.

CONSIDER THESE FACTS!

Dazzo shelter anchors permanently on the building wall around the door. It retracts or extends in 10 seconds. No tugging, no springs; it works by gravity. Eight different models, custom tailored to fit every need.

DAZZO PRODUCTS, INC.

152 Bleecker St., N.Y. 12, N.Y.
Telephone: ORegon 3-5298

DAZZO PRODUCTS, INC.	
152 Bleecker St., N.Y. 12, N.Y. FL2-58	
FREE CATALOG!	
Please send me, "Loading Dock Shelters Catalog".	
Name	
Company	
Address	
City, State	

Circle 22 on Reader Service Card

Keeping the Powder Dry . . .



Heat-Sealed Liner Fights Moisture

Heat-sealed polyethylene liners adopted by Rohm & Haas Co. for use in shipping Plexiglas acrylic molding powder have proven themselves six ways:

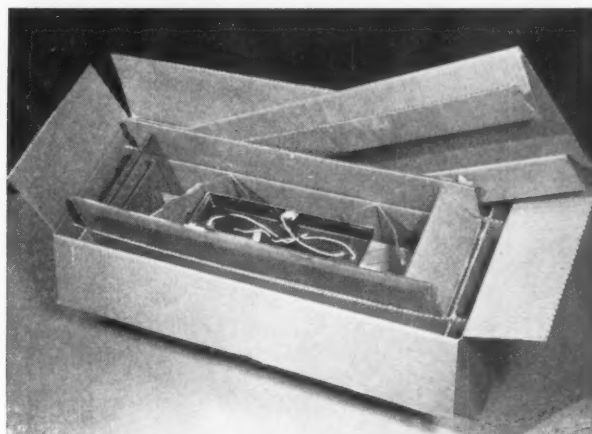
1. Vapor proof characteristics of polyethylene have minimized moisture pick-up.
2. Positive, vapor proof closure is possible because polyethylene is easily heat sealed.
3. The liner material is in adequate supply and easily procured.
4. It is easily fabricated into gusseted bags.
5. Polyethylene contains no plasticizer which could cause contamination by migration.
6. Gussets in the sides of the

liner allow it to expand into corners of a square container without stretching or distorting.

In the packaging operation, a liner is placed in a corrugated bulk container and its top edges stretched over the sides of the container. After it has been filled, the liner is heat-sealed across the top the bulk container is closed and the entire unit is strapped to a pallet for shipment.

At the customer's plant, the molding machine operator removes a knock-out plug in the container top and cuts the liner. The product is transferred into the machine's hopper by an air conveyor. Thus, unloading is every bit as simple a job as loading.

Package for Delicate Products



A TWO-PART GLASS and metal lighting fixture is being packaged in a specially constructed shipping container at Del-Val Mfg. Co. of Philadelphia. The package consists of an inner and outer container with several fitted inserts.

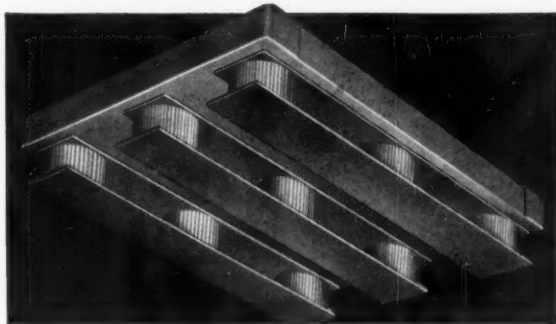
In packaging the fixture, the glass cover is inserted into an accordion-folded sheet of corrugated paper which is then extended the length of the inner container. This floats the glass fixture inside the package. The top rim of the sheet is cut to hold the metal fixture with the electric outlets hanging downward into the container without touching the glass. The glass is fur-

ther cushioned by scored pads at each end of the inner container.

Protective cushioning is completed by the exterior shipping container. This is accomplished with separate spring pads which fit between the top and bottom flaps of the two containers and slotted partitions which form a frame along the side and end panels of the inside container.

With this combined packaging, a compact, efficient unit is formed which gives the fragile product proper safeguarding in shipping and handling.

Courtesy Robert Gair Co., Inc.



Bottom view of Signode expendable pallet showing patented corrugated posts.

Weights 10 pounds . . . supports 6000

- Low cost** Signode expendable pallets are low in first cost; eliminate all maintenance cost, save storage space.
- Light weight** Cut shipping costs every mile, every load. Easy and clean to handle.
- Strong** Rugged construction proved in use and in famous Signode testing laboratory.
- Versatile** Standard or special sizes. Post placement variable. Tray or flat tops.
- Expendable** No returns, therefore no shipping, record-keeping or storage costs on returns.

Competent Signode assistance on expendable pallet design and unitizing methods is available. For information on Signode Addison-Semmes pallets, write:

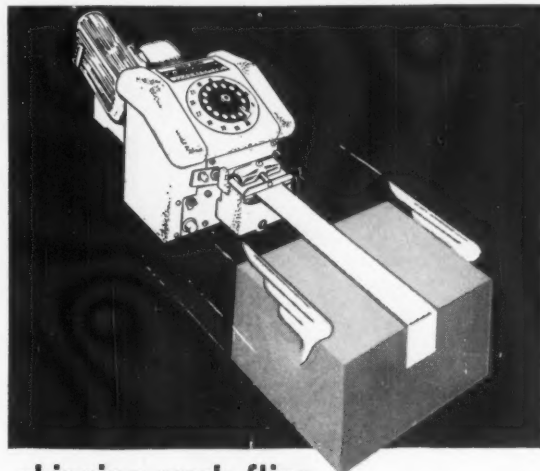


SIGNODE STEEL STRAPPING CO.

Dept. SP, 2618 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.

Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

Circle 93 on Reader Service Card for more information
FEBRUARY, 1958



shipping work flies

with a MARSH Electric DIAL-TAPER

Dial desired length—out comes moistened, ready-to-use tape for any size carton.

Electrically-heated water softens tape glue for complaint-proof seal.

You save up to 20% in time and tape.

Write for free booklet T-18.

MARSH Electric
Dial-Taper

Marsh Stencil Machine Company
67 Marsh Bldg.
Belleville, Illinois

T-26

Circle 66 on Reader Service Card for more information



Let us demonstrate — right in your plant or shop — how 'Budgit' Hoists can make your lifting problems disappear.

Free Demonstration

IN YOUR PLANT OR SHOP

**Make us prove how 'Budgit' Hoist
can solve YOUR lifting problem**

Your local 'Budgit' Electric Hoist distributor now makes you this special offer:

You pick the spot where you need help in lifting.

Call your 'Budgit' Hoist distributor. (You'll find him listed in the yellow pages under 'Budgit'.) He'll bring a 'Budgit' Hoist to the spot you name, hang it up, plug it in, and show you how 'Budgit' can make your lifting job fast, safe and effortless.

No obligation. Demonstration takes only minutes. All you need is a place to hang the Hoist and an electrical outlet (or 12-volt battery).

HANDLES ANY LOAD

The 'Budgit' Electric Hoist can handle any kind of load up to 2 tons: machinery units, castings, crates, dies, pipe . . . anything. Works indoors or out. Has two automatic brakes for extra safety. Either alone can hold the load.

One-hand control leaves your other hand free to guide the load. Hairline stops and starts let you "spot" your load gently within 1/100th of an inch.

AC and DC models. Also 12-volt battery models for use on trucks. Prices start at \$159.

Call your Shaw-Box distributor today or write for your copy of Bulletin 402 and 404. No obligation of course.



'Budgit'® ELECTRIC HOISTS

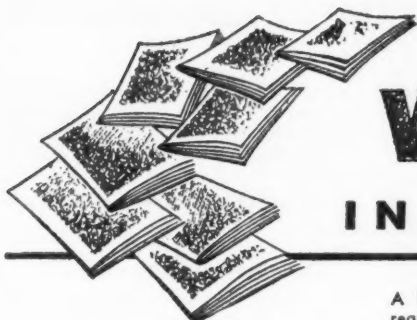
MANNING, MAXWELL & MOORE, INC.

SHAW-BOX CRANE & HOIST DIVISION
366 West Broadway • Muskegon, Michigan

Builders of "SHAW-BOX" and "LOAD LIFTER" Cranes, "BUDGIT" and "LOAD LIFTER" Hoists and other lifting specialties. Other Divisions produce "ASHCROFT" Gauges, "HANCOCK" Valves, "CONSOLIDATED" Safety and Relief Valves, "AMERICAN" and "AMERICAN-MICROSEN" Industrial Instruments, and Aircraft Products.

In Canada: Manning, Maxwell & Moore of Canada, Ltd., Avenue Road, Galt, Ontario.

Circle No. 60 on Reader Service Card for more information



WHAT'S NEW

IN USEFUL LITERATURE

A bibliography of New and Current Manufacturers' Publications available upon request. Indicate choice (s) on self-mailing Reader Service Card on pages 35 and 36.

Docks On The Level:

An eight-page brochure just published by Rowe Methods, Inc. illustrates and describes the company's complete line of powered adjustable ramps for loading docks. It covers Rowe's non-floating, manual floating and automatic floating models of the Adjust-A-Dock, a hydraulic dock leveler with capacities from 10,000 to 20,000 pounds. Each type is pictured, along with detailed specifications and design and operating data. A special section lists factors you should consider in selecting a dock leveling device. The brochure also describes the Adjust-A-Truck, designed for use where dock space is limited. This unit has a 40,000 pound capacity, and is installed in the pavement in front of the docks.

Circle 208 on Reader Service Card

Better Than A Mink Coat:

A coating of Petrothene is better protection than a mink coat, says U. S. Industrial Chemicals Co. In a 4-page bulletin published recently, the firm describes Petrothene as a polyethylene resin that is coated over kraft papers, fabrics, films or foil. It is skin tight, water and vapor resistant, and heat-sealable. USI offers engineering service to show you how these polyethylene coated materials can be used as barrier wraps, etc.

Circle 209 on Reader Service Card

Digital Computing Made Simple:

The latest digital printout techniques for automatic proportioning are explained in a 12-page report available from Richardson Scale Co. Called Automation In The Mill, it is a design study of a specialized control problem. It highlights Richardson's widely applicable techniques for weight selection by potentiometer, servo suspension of feeder motors, digital computing for printout and totalizing digital time indication and recording, and electrical sequencing and interlocking.

Circle 210 on Reader Service Card

Every Fourth Box Is Free:

Hinde & Dauch explains in its pack-

age Laboratory News how conversion to corrugated containers reduces packaging costs by one-quarter. In this way, the company points out, users get a bonus of one free box out of four. The literature explains how the company's various types of containers are used to package a variety of light and heavy goods, from water coolers to giant valves.

Circle 211 on Reader Service Card

Heavy Duty Vibrator:

The National Air Vibrator Company has designed a pneumatic vibrator which is adapted for continuous, heavy duty service on bins, hoppers, and chutes for the basic processing industries. Details of all models available are shown in a catalog prepared by the firm.

Circle 212 on Reader Service Card

You Can Nail Corrugated:

Tri-Wall nailing clips are specially designed to secure nails and bolts into triple-wall corrugated board, without shearing. They are described in a four page folder by Tri-Wall Containers, Inc. The literature also describes how corrugated containers of triple-wall corrugated can be used to pack machinery, furniture, and many other items.

Circle 213 on Reader Service Card

Wire Guide for Packaging:

Box-stitching wire, metal stitching wire, staple wire and special binding wire are the subjects of a four-page bulletin published by H. K. Porter Company, Riverside-Alloy Metal Division. This literature covers both the wire, in various specifications, and the different spools and coils it comes in. It also includes a handy Wire Gauge Table, covering both Washburn and Moen (W & M) and Brown and Sharpe (B & S) gauges.

Circle 214 on Reader Service Card

Polyethylene for Hardware Packaging:

Volume 3, Number 8 of Packaging with Plastics tells how a number of manufacturers have successfully pack-

aged hardware products in bags of polyethylene film. The 12-page booklet, published by Union Carbide Corporation, points out seven areas where polyethylene can boost your profits: material costs, moisture-proofing, size selection, point-of-purchase displays, shelf life, protection from damage, and self-service merchandising.

Circle 215 on Reader Service Card

Service Narrative:

"Here's Something Worth Thinking About" is an eight-page booklet (Form DE766) released by Caterpillar. Written in narrative form, it tells the story of how one contractor is keeping operating costs down by using the facilities and services offered by Caterpillar dealers. Illustrated with photos and drawings, the booklet discusses parts quality, delivery, parts inventory, shop facilities and field service.

Circle 216 on Reader Service Card

Fittings Catalog:

Crosby-Laughlin Division of American Hoist & Derrick Company offers Catalog No. 950-2 to provide answers for anyone using or specifying drop forged fittings for wire rope and chain. It includes specifications, dimensions, rated capacities and weights.

Circle 217 on Reader Service Card

Package of Bulletins:

Three brochures, each describing a different lifting capacity, have been produced for a walkie-stacker electric lift truck line. Automatic Transportation Company will send you the specific bulletin for the 2,000 pound capacity (WST-20), 2,500 pound (WST-25), and 3,000 pound (WST-30) Transporter. Sales drawings, specifications, and explanations of components are given.

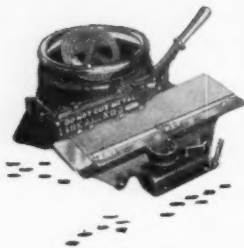
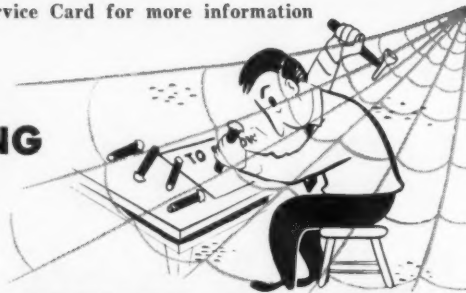
Circle 218 on Reader Service Card

Light Duty Trolley Conveyor:

Mathews Conveyor Company supplies data on its No. 232 overhead trolley conveyor developed for light duty service. It's available in a 6-page brochure that provides photographs and engineer-

Circle No. 46 on Reader Service Card for more information

STOP SLOW MOTION STENCIL CUTTING the IDEAL WAY with an IDEAL Automatic STENCIL MACHINE



ELIMINATES STENCIL BOARD WASTE. The Ideal Automatic Stencil Machine features Ideal's exclusive automatic paper carriage and line spacer that space letters, words, and lines properly . . . no more letter overlaps or rough uneven lines! Each stencil is clean and correct the first time you cut it. Ideal's minimum margin grip gives you added savings, too. You can use 4½" x 16" board instead of 6" x 16" . . . and save a minimum of 20%.

NO CHARACTER HUNTING DELAYS. The Ideal Automatic Stencil Machine makes itself welcome in any shipping room because it makes letter positioning simple and speedy . . . no aggravating delays to hunt for the character you can't seem to find. Just a spin of Ideal's character wheel mounted at a natural reading angle, and the next character is positioned to cut.

LASTS AND LASTS. Ideal Automatic Stencil Machines are engineered to give years of trouble-free operation, even under conditions normally adverse to long machine life . . . rugged to meet every shipping room demand.
● The Ideal will help you cut plant costs. Write for free literature.

IDEAL

STENCIL MACHINE CO.

104 IOWA AVE., BELLEVILLE, ILL.



MODEL A

FOR LOW COST MATERIAL HANDLING



MODEL B



MODEL C



EXPENDABLE

**USE . . .
BIGELOW-GARVEY
COLLAPSIBLE
TIGHT-CORNER
PALLET BOXES**

THEY'RE REUSABLE

- Economical
- Safe and Neat
- More Convenient
- Quickly Assembled
- Handles up to 5000 lbs.
- Collapsible When Not in Use
- Specially Made For Your Needs

Over 33 Years Material Handling Experience

MISSOURI ARKANSAS GEORGIA WISCONSIN MINNESOTA KENTUCKY

Write for complete details and prices to . . .

BIGELOW-GARVEY

lumber company

General Office and Laboratory 226 W. HUBBARD STREET - CHICAGO 10, ILLINOIS

Circle 87 on Reader Service Card

100

CAPCO DOCK COVERS GIVE YEAR 'ROUND PROTECTION

CAPCO Dock Covers completely enclose the space between car and building doorways protecting loading and unloading during bad weather . . . preventing accidents . . . insuring against loss of heat or refrigeration. 31 different models in any size for every loading problem.



Write for literature and name of nearest distributor.

CAPCO

622-24 PROSPECT AVENUE • KANSAS CITY 24, MISSOURI

Circle 16 on Reader Service Card

. . . USEFUL LITERATURE

ing drawings that make up the conveyer unit—sprocket drive unit, trolley assembly, spread type sprocket take-up unit, and 45 and 90 degree sprocket turns.

Circle 219 on Reader Service Card

Portable Loading Aid:

Lodge Manufacturing Corporation has prepared a booklet about the Rapid Loader "Express." This is a portable hydraulically operated platform-type device that has many applications in loading and handling situations. The bulletin includes photographs of the "Express" being used as a portable dock, a temporary bridge, and a side-loading handler.

Circle 220 on Reader Service Card

Helps Chain Selection:

Catalog 610, "Mechanical Power Transmission and Conveying Machinery," is published by Chain Belt Company. It lists the lines of chain available for power transmission, timing, tension, and conveying application. The forepart of the book has two pages of basic selection data to simplify the general selection of the right type chain for the more common applications.

Circle 221 on Reader Service Card

Reflex Braking System:

A bulletin explaining the Autotrol system of braking—stopping is accomplished by the driver relaxing pressure on the gas pedal above the accelerating and coasting zones—has been published by Automatic Brake Corporation. This system can be adapted to all types of commercial and industrial cars and trucks. It is applied to the vehicle's own air, hydraulic or vacuum braking system, which is interconnected and remains fully operable.

Circle 222 on Reader Service Card

Door Story:

An eight-page booklet from Barber-Colman Company brings information on the Barcol door sections, hardware, and electric door operators. Bulletin F8436 shows photographs of these components and detailed drawings of some special installations.

Circle 223 on Reader Service Card

Features Textile Wheels:

An eight-page catalog (No. 8157) is devoted exclusively to casters and wheels designed for the textile trade. Published by the Faultless Caster Corporation, the catalog features a semi-steel wheel with deep-drawn thread guards and grease-sealed wheel bearings. The die-cut center section of this

FLOW

... USEFUL LITERATURE

catalog simplifies selection and matching of casters and wheels which will best serve the particular material handling needs of the textile industry.

Circle 224 on Reader Service Card

Truck Models Listed:

Hydraulic hand lift trucks manufactured by Barrett-Cravens Co. are treated in Bulletin 572. These lift trucks are equipped with a specially designed hydraulic lift system that enables the Model HJ to raise 2500 pounds three inches with only six strokes. Specific model designations are listed according to dimensions.

Circle 225 on Reader Service Card

Narrow Aisle Equipment:

The Raymond Corporation has issued a general bulletin (No. 201) to describe its narrow-aisle outrigger type and Reach Fork electric tiering trucks, plus 13 special models for solving specific handling problems. Hand trucks for operation in narrow aisles are shown; also, a 2000-lb capacity pallet truck and a 4000-lb electric walkie.

(Also reviewed in January)

Circle 226 on Reader Service Card

Standard and Special Trucks:

Catalog GF-7 has been published by Jakes Foundry Company to cover the complete lines of platform trucks, industrial trailers, hand trucks, wheels, and conveyor trucks. Also shown are special trucks built for specific requirements of users.

Circle 227 on Reader Service Card

For Packaging Economy:

"How to Ship More Economically in Corrugated Boxes" is the title of a Little Packaging Library booklet published by Hinde & Dauch. The 24-page booklet offers pertinent advice on the designing, testing and storing of product packages. It also includes information on the planning of the shipping department and on money-saving in the packing, sealing, warehousing and shipping of corrugated boxes.

Circle 228 on Reader Service Card

Describes Tow Tractors:

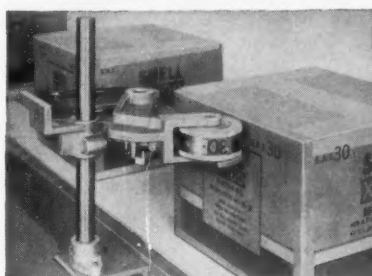
A bulletin (BU-337A) supplies data on two industrial towing tractors manufactured by the Buda Division, Allis-Chalmers Manufacturing Company. Model TG-45 is a 4500 pound capacity machine; Model TG-50 has a 5000 pound capacity. Specifications, operating data and features (such as the low silhouette) are included.

Circle 229 on Reader Service Card

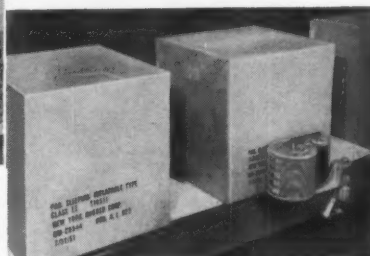
Circle No. 42 on Reader Service Card for more information

Low-cost marking attachment pays for itself in weeks...saves thousands of \$ every year

Imprints 1, 2 or 4 sides of cases in single pass



▲ ROLACODER twin-action markers ...for imprinting codes and lot numbers on 2 or 4 sides of cases simultaneously ...without requiring cases to be turned.



▲ ROLACODER single-side marker for accurate spot imprinting of brand names, varieties, code-dates, lot numbers on cases, cartons, fibre drums, bags, etc.

Friction-driven ROLACODER markers do your marking automatically...save cost of manual stencilling or stamping. Designed for easy do-it-yourself installation on existing conveyor lines, case-sealers, etc. They use quick-change rubber type or dies, hold 8-hour ink supply.



Write for descriptive literature

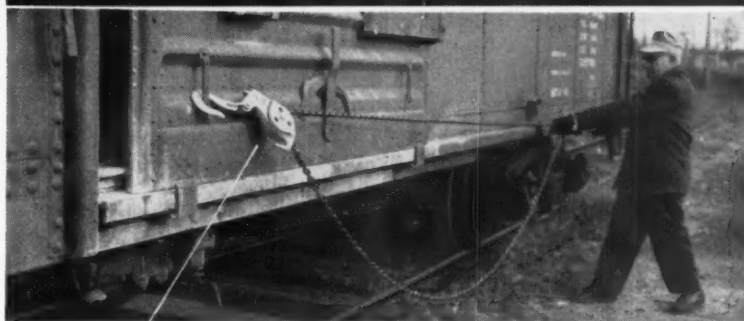
ADOLPH GOTTSCHO, INC.

Dept. D, Hillside 5, N.J.

In Canada: RICHARDSON AGENCIES, LTD., Toronto & Montreal

Automatic
Production-Line
CODING, MARKING,
IMPRINTING
MACHINES

TERRIFIC PULLING POWER!



THE NOLAN ONE MAN CAR DOOR OPENER
opens or closes any freight car door in 20 seconds or less

The Nolan Model H One-Man Car Door Opener has been in successful use for many years, by thousands of companies who recognize its exclusive features of speed and safety. This popular tool enables one man to do by himself what formerly required the time and assistance of several men, usually taken off other jobs, to tug and yank while risking mangled hands, strained backs, and other serious injuries.

The average time required by one man to open or close a boxcar door with the Nolan Model H is 20 seconds or less. With a few quick pulls on the anchor chain, as shown here, you can get the most stubborn door rolling and wide open in a jiffy.

Your investment in a new Nolan Model H One-Man Car Door Opener will pay dividends by saving time, life and limbs throughout its long and useful life. It will keep men working steadily and safely without exposing them to the hazards present when make-shift methods are used to open car doors. Note above how operator is away from the front of the door ... away from its injurious, killing effects if it should fall!

Order one or more
Nolan Model H Car Door
Openers Today!

ONLY
\$39.50
EACH

F.O.B. Bowerston



THE NOLAN COMPANY

110 PENNSYLVANIA ST.
BOWERSTON, OHIO

Circle No. 76 on Reader Service Card for more information

How Much Is

hidden damage

**Costing You
In Cash, Time, Trouble
And Good Will?**

You can't afford to play hide and seek with damage! Just imagine the total time loss resulting from delivery of a damaged product . . . the additional complications and costs and, most of all, the loss of your customer's good will. These are all very real factors in your total packing, handling and shipping costs . . . factors that can't be ignored on the balance sheet.

You can eliminate embarrassment and expense by packing your product in a tough, protective "see through" Wirebound Crate that allows fast, easy inspection at any time. Investigate Wirebounds for lower cost, safe packing, handling and shipping. Write for the informative booklet "What to Expect From Wirebounds," or ask for a sales engineer to call.

Product visibility
eliminates Hidden Damage.

Write for the Book
or the Man



**Wirebound
BOXES & CRATES**

**WIREBOUND BOX
MANUFACTURERS ASSOCIATION**
Room 1171 327 So. LaSalle St., Chicago 4, Ill.

Aids Timely Maintenance:

John W. Hobbs Corporation has issued a folder (No. 2 in a series) that tells about the use of the Hobbs Engine Hour Meter on construction equipment. The Meter tells in hours and minutes the operating time of the equipment on which it is installed.

Circle 230 on Reader Service Card

Crane-Excavator Described:

An illustrated bulletin (No. CR-502) tells about the Model CR-35 Bantam, a self-propelled crane-excavator. Available from the Schield Bantam Company, the brochure has one page devoted to machine specifications and capacity ratings. Charts show lifting capacities and digging ranges for crane, shovel and backhoe attachments.

(Also reviewed in January)

Circle 231 on Reader Service Card

Container Filling Manual:

Hope Machine Company will provide its operating manual of the two line filling machine (Type 19S) to companies engaged in filling containers with liquid or viscous products. The 36-page booklet contains 16 exploded view drawings, detailed operating instructions and points on maintenance, plus a parts list.

Circle 232 on Reader Service Card

Hydraulic Power News:

"Lift" is a monthly bulletin published by the Globe Hoist Company. It specializes in new applications of oil-hydraulic power for heavy lifting, loading, positioning and material handling operations.

Circle 233 on Reader Service Card

Install Your Own Conveyor:

A "do-it-yourself" installation workbook for users of power belt and gravity conveyors has been edited by the Conveyor Department, A.B. Farquhar Division, The Oliver Corporation. Bulletin 500 is a step-by-step guide to the selection, installation, and operation of conveyors. Its 20 pages include conveyor types and symbols, condensed specifications, graph paper for plotting the conveyor line, and a check list to help you select the right conveyors.

Circle 234 on Reader Service Card

"The Strange Case of the Melancholy Mayor":

When Tom was elected Mayor, everything went fine—until he ran up against a sanitation problem in his business district, where garbage and rubbish were overflowing in the alleys. How Tom was saved by his District Godfather, Sanitation Division, and the Dempster Dumpster is told in a car-

... USEFUL LITERATURE

toon-type booklet available from Dempster Brothers. The containerization system is explained and a "pay-as-you-go" plan offered.

Circle 235 on Reader Service Card

Hydraulic Hoists for Trucks:

"Hoist Power Worth Looking Into" is the title of a brochure offered by Daybrook Hydraulic Division, L. A. Young Spring & Wire Corporation. It unfolds to a single sheet that pictures the different hoist series. Close-up photos of component parts (pump, valve, cylinder) illustrate their features.

(Also reviewed in January)

Circle 236 on Reader Service Card

Lift Truck Brochure:

The Elwell-Parker Electric Company has issued a four-page bulletin about the Elpar Model F-26T2, a 2,000 pound capacity electric powered fork truck. The truck is designed for applications where quick handling and tiering of loads, often in confined areas, is an important factor, says the manufacturer. The literature is illustrated with application and product design photographs.

Circle 237 on Reader Service Card

Catalog Shows Custom Equipment:

Custom industrial cars are pictured in Catalog C published by Easton Car and Construction Company. Motor-driven cars are featured, including units which have power or mechanically operated superstructures for special handling, dumping, or feeding operations. Transformer, furnace, cross-bay transfer, steel mill, and platform cars are some of the units photographed and described.

Circle 238 on Reader Service Card

Tells About Crane-Excavator:

Bucyrus-Erie Company has issued an information sheet on the 11-B Transit Machine. This unit converts from a 10-ton lifting crane to a dragline, clam-shell, hoe, or shovel to handle a variety of jobs. It is mounted on a 6-wheel drive carrier which is capable of speeds up to 47 mph.

Circle 239 on Reader Service Card

Explains Blending System:

The Airmerge System (blending pulverized materials in a silo through quadrant aeration) is the subject of a four-page bulletin from Fuller Company. Divided into three sections, the bulletin discusses a typical installation,



1 Staple special cartons and corrugated fillers far faster with powerful DUO-FAST Air Pliers. Portable. You save time by taking tool to the work, instead of moving work to a big stationary stitcher!

2 Attach tags, labels, freight bills with DUO-FAST "Outward-Clinch" Stapler. Staple-legs drive in, then out to guard carton contents from damage. Holds better than tape at 1/10th the cost!

Which of these 3 stapling ideas can save most in your packaging?

Shown here are 3 of the ways DUO-FAST automatic stapling can reduce costs for you. There are many more.

Cartoning, bagging, padding, tagging—whatever your packing operation may be, you'll do it faster, neater and easier with a handy DUO-FAST Stapler.

Ask your DUO-FAST man. With over 150 staple-tacking models to draw on, he'll show you the safe, accurate, automatic way to streamline your fastening methods.

Free maintenance service. And remember: every DUO-FAST Stapler carries a money-saving Free Service Guarantee! Send coupon below for free "Timesavers" Bulletin FT-50.

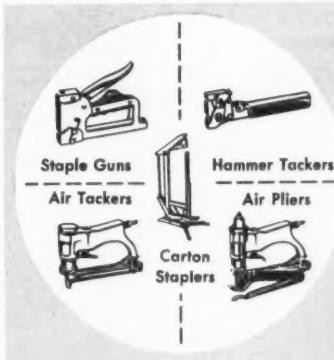


3 Make up cartons for a fraction the cost of tape with a DUO-FAST Footpower Stapler. Leaves both hands free for neater, faster work. Easily portable—weighs just 38 lbs.

DUO-FAST

Staplers • Tackers • Staples

8135



New Ideas for you!

FASTENER CORPORATION

3756-58 River Rd., Franklin Park, Ill.

Without cost or obligation, please:

- ☐ send DUO-FAST Bulletin FT-50, "Timesavers for Shipping Departments."
- ☐ have a DUO-FAST man call on us.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

Circle No. 31 on Reader Service Card for more information



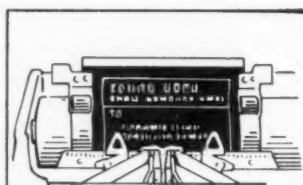
Just "touch" the carton and there's your label

Weber Touch-Stenciling—the fast easy way to address multiple carton shipments...

No more stencilboards, rubber stamps or label typing. Instead, you can print facsimile labels directly on cartons with just a "touch" of a Web-O-Print hand duplicator.

Stencils are pre-cut to duplicate your label. Customer's name and address or product information is filled in on a typewriter or by hand. Then slip the stencil on the handy duplicator and touch-stencil all the cartons in the shipment. The duplicator leaves a clean, sharp print that will not fade, rub or wash off.

It's so easy to do. With a smooth, one-hand motion 40 to 50 cartons can be addressed in a minute. The duplicator holds enough ink for several thousand impressions and it prints anywhere — cardboard, wood, paper, smooth or rough, round or flat surfaces. After the shipment has been addressed the stencil is thrown away, saving filing time and space.



FAST, EASY. Stencils are pre-cut to your specifications. Type or handwrite in the variable data and slip on duplicator. Takes just seconds to change stencils for each order.



Send for free bulletin on Weber "Touch-Stenciling" methods. Packed with ideas on addressing and marking multiple shipments.

Weber MARKING SYSTEMS

Weber Marking Systems
Div. of Weber
Addressing Machine Co., Inc.
Mount Prospect, Illinois

Sales and Service in all principal cities.

WEBER MARKING SYSTEMS
Dept. 1-B
Mount Prospect, Ill.

Send me your bulletin on "Touch-Stenciling" methods.

Company _____

Individual _____

Position _____

Address _____

City _____ Zone _____ State _____

Circle No. 107 on Reader Service Card for more information

... USEFUL LITERATURE

the development of Airmerge, and the principles involved. An isometric drawing shows how dry materials are homogenized by combining quadrant blending and pulsated aeration.

Circle 240 on Reader Service Card

Crane Control Data:

General Electric Company offers an eight-page bulletin (GEA-6434A) that specifies a line of front-connected DC crane control panels. Performance characteristics are given and typical speed-load and torque-speed performance curves are provided. There are photographs and descriptions of the panel's components.

Circle 241 on Reader Service Card

Strapping Tool Brochure:

An eight-page brochure covers uses of the B5 stretcher models produced by Acme Steel Company. It has three pages of photographs of this tool being used in various positions, on different kinds of material. A table of specifications cross-references strap sizes to individual model numbers.

Circle 242 on Reader Service Card

Conveyor Case Histories:

Two case history bulletins have been prepared by Mechanical Handling Systems Inc. PF-101 records the method, problems and advantages of a power and free conveyor system installation in a fabricating and assembly operation. Warehousing by power conveyor is the subject of WH-102; a memory system, a fault-finding and troubleshooting system are features of the automated installation.

(Also reviewed in January)

Circle 243 on Reader Service Card

Short Study in Truck Electricity:

Battery power for industrial trucks is easy to understand, says Exide Industrial Division of The Electric Storage Battery Company—and offers a two-page instruction sheet to prove it. Titled "Simplified Electricity for Electric Industrial Trucks," the bulletin covers the fundamentals of truck electricity in question-and-answer form. Graphs and drawings illustrate some of the points made in the text.

(Also reviewed in January)

Circle 244 on Reader Service Card

How To Select a Truck:

Lewis-Shepard has designed a comparison chart for electric fork lift trucks. This chart is an aid to evaluat-

ing features of different truck models. The potential truck customer fills in specific information about the trucks, then makes the comparison. The chart has 31 categories requiring information; questions are asked about turning radius, lifting and lowering speeds, fork elevations, collapsed height, type of controls, capacity and braking system, etc.

Circle 245 on Reader Service Card

Talks About Lumber Shipping:

"Packaged Lumber and Interlace Load Securement" is the name of a booklet from Acme Steel. The cross-piece and strapping method of securing lumber is described; its benefits to mills, carriers, receivers are listed. Tools used with this method are illustrated on the back page.

(Also reviewed in January)

Circle 246 on Reader Service Card

Material Handling Catalog:

Specific data on a line of material handling devices is presented by Merrill Brothers in the Catalog C-1. It contains 16 pages of product illustrations, application drawings, tables, diagrams, engineering data, and other technical information.

Circle 247 on Reader Service Card

Circle No. 132 on Reader Service Card for more information



SWIVEL KING

PALLET ROLLERS



For complete specifications, sizes, capacities, etc., write for Eng. Bulletin 104K.

Distributorships Available

ANY OLD DIRECTION

360° MOVEMENT




ACE REEFER KING ACE STEVEDORE KING

ACE ENGINEERING ASSOCIATES INC.

FORMERLY FRANK L. ROBINSON CO.

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PROTECT MERCHANDISE FROM THE WEATHER ...

REDUCE BUILDING HEAT AND COOLING LOSSES with

FOLDING LOADING DOCK COVERS

- Simple, inexpensive, sturdy construction.
- Variety of sizes and styles to meet all possible conditions.
- Tailored to your loading dock conditions.
- Folds away when not in use.

Saves many times its cost in preventing merchandise damage in rainy, cold or hot weather. Made of heavy flame and water-resistant canvas with sturdy frames and hardware. Scissors arms permit folding—give rigid support to cover in worst weather. Folding Canvas or Asbestos Welding Screens. Stock sizes and specials.

Tarpaulins ... 100,000 Sq. Ft. in Stock

Write us for all your needs . . . industrial, commercial, private.



A. MAMAUX & SON

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• DEALER TERRITORIES OPEN •

Circle 164 on Reader Service Card for more information
FEBRUARY, 1958

Quicker, Easier, Less Costly STENCILING with REYNOLDS SPRAY STENCIL INKS

quick drying—waterproof

Specially compounded ink assures utmost economy and satisfaction.

Many outstanding advantages:

MODERN easy to hold aerosol container sprays a dense cone of specially formulated opaque ink at the touch of a finger. Not a paint or lacquer. Dries instantly. Always ready to use. No brushes to clean or load. No drying out. No mess. No waste. No build-up or curtaining.

PROVEN BEST for all stenciling on boxes, crates, cartons, drums, or any steel, wood, fabric, concrete or other surface.

9 COLORS. Ideal for color coding equipment and materials, design layout work, inspection marking, department routing, signs and warnings, etc.

ASK US ALSO about Reynolds sprayed Stencil Kover®, the opaque tan colored block-out fluid that covers over old stenciling or other markings. Dries quickly. Permits re-stenciling of original containers, correction of errors, and salvaging overruns of printed cartons.



WRITE for color card and name of nearest dealer TODAY!

**REYNOLDS
INK, INC.**

4508 EUCLID AVE.
CLEVELAND 3, OHIO

Circle 114 on Reader Service Card for more information

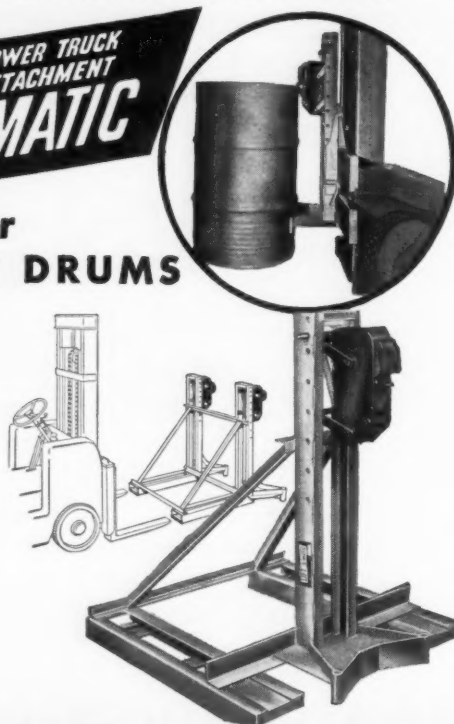
Circle No. 67 on Reader Service Card for more information

USE THE

LIFT-O-MATIC
POWER TRUCK
ATTACHMENT

for
HANDLING DRUMS
with a
**POWER
FORK TRUCK**
WITH FORKS
LEFT ON
OR
REMOVED

Simple, automatic, mechanical handling of any size or type of drum—single or multiple.



WRITE FOR
CATALOG

MARVEL INDUSTRIES, Inc.
2226 CLEVELAND ST., EVANSTON, ILLINOIS

... USEFUL LITERATURE

Continued

New Products Data:

Bulletin M-15, available from the Martin-Decker Corporation, supplies information about that company's latest product developments. Some items described: A hook scale that works without friction; a crane weight indicator; a lift truck scale; and such scale components as pulsation dampers, check valves, sensor diaphragms, and high-pressure load cells.

Circle 248 on Reader Service Card

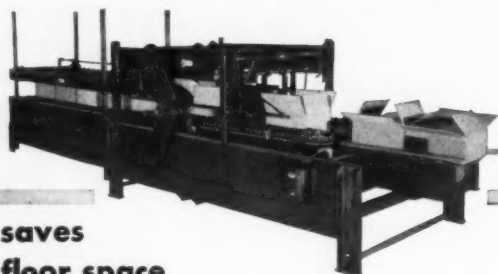
Do You Know What "Modular Panel Packaging" Is?

Answer: "An engineered system in which a maximum number of sizes and shapes of shipping containers are available to shippers from a minimum number of fixed-size panels." NaVan Products, Inc., offers a literature kit to explain KMPP (Klimp Modular Panel Packaging, named after the Klimp fastener, around which the system was built). The kit contains cost analyses and comparisons; a computer for figuring box material requirements; a "How To" manual that gives assembly instructions; and other pertinent information on the system.

(Also reviewed in January)

Circle 249 on Reader Service Card

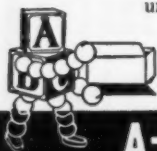
A-B-C Short Case Sealer



saves
floor space

This A-B-C Short Case Sealer really increases packaging efficiency. Glues, folds and seals either or both top and bottom flaps in one operation—automatically. Speeds up to 30 cases a minute. Finest welded construction. Ball bearing construction reduces maintenance. Guaranteed not to get out of "time."

WHATEVER YOUR PACKAGING PROBLEM, there's a proved A-B-C machine to solve it—case sealers, unloaders and unscramblers, side sealers and hand gluers.



WRITE TODAY FOR DETAILS—
FLOOR PLANS & SPECS

A-B-C PACKAGING MACHINE CORP.
TARPON SPRINGS, FLORIDA

Circle 127 on Reader Service Card for more information
106



20 ton capacity.



Industrial TRUCKS and TRAILERS

"Ohio" Trucks and Trailers—in various sizes and capacities—meet many material handling requirements, in different industries. Both standard and specially-designed units offer you sturdy construction, and long, continuous service at minimum cost.

Contact "Ohio" today for free literature and complete details.

THE OHIO GALVANIZING & MFG. CO.
NILES OHIO

Circle 77 on Reader Service Card for more information
FLOW

News About Belting:

A new development insert sheet from Globe Woven Belting Co., Inc., tells about Hycar conveyor belting. This material is made of high tensile duck, calendered with natural rubber, with skim coat between all plies and a friction surface top and bottom. The literature has lists of characteristics and specifications (such as recommended load per inch, overall belt thickness, minimum breaking strength per inch, etc.).

Circle 283 on Reader Service Card

Case History Offered:

From Sage Equipment Company, Inc., comes Report No. 101, which deals with an application of push-off type transfer devices. The problem was to automatically separate labelled and unlabelled rolls of cellophane in process. The solution featured a slider bed conveyor and a push-off device consisting of a photoelectric system and a solenoid-operated air cylinder.

Circle 284 on Reader Service Card

Shop Equipment Catalog:

An eight-page illustrated catalog is offered by Standard Pressed Steel Co. to review its Hallowell line of steel shop equipment for shop, laboratory and assembly line. More than a dozen different shop furniture categories—including multiple unit benches, cabinet benches, open-type work benches, shop desks, steel carts, tool stands, stools and chairs—are listed.

Circle 285 on Reader Service Card

Cart Ordering Data:

SI Handling Systems (a division of Safety Industries, Inc.) has released Data Sheet 100 on manual and dragline carts. Construction options permit the buyer to order custom-built carts assembled to his specifications from standard components. Such options include choice of couplers for in-floor or overhead draglines and for trailers; deck sizes and materials; round or square corners; construction of racks; wheel sizes and materials.

Circle 286 on Reader Service Card

For Solving Traffic Problems:

Places to install automatic door controls and the kinds of controls needed are the subject of a bulletin from Magic Door Sales, Stanley Hardware Division of the Stanley Works. Carrying the title "Plant Ideas To Make Efficiency Grow," the booklet has photographs of door controls at work—at main entrances, between departments, in cafeterias, where rooms are air-conditioned, in offices and reception rooms, and in receiving and shipping areas.

Circle 287 on Reader Service Card

ALL-HYDRAULIC!

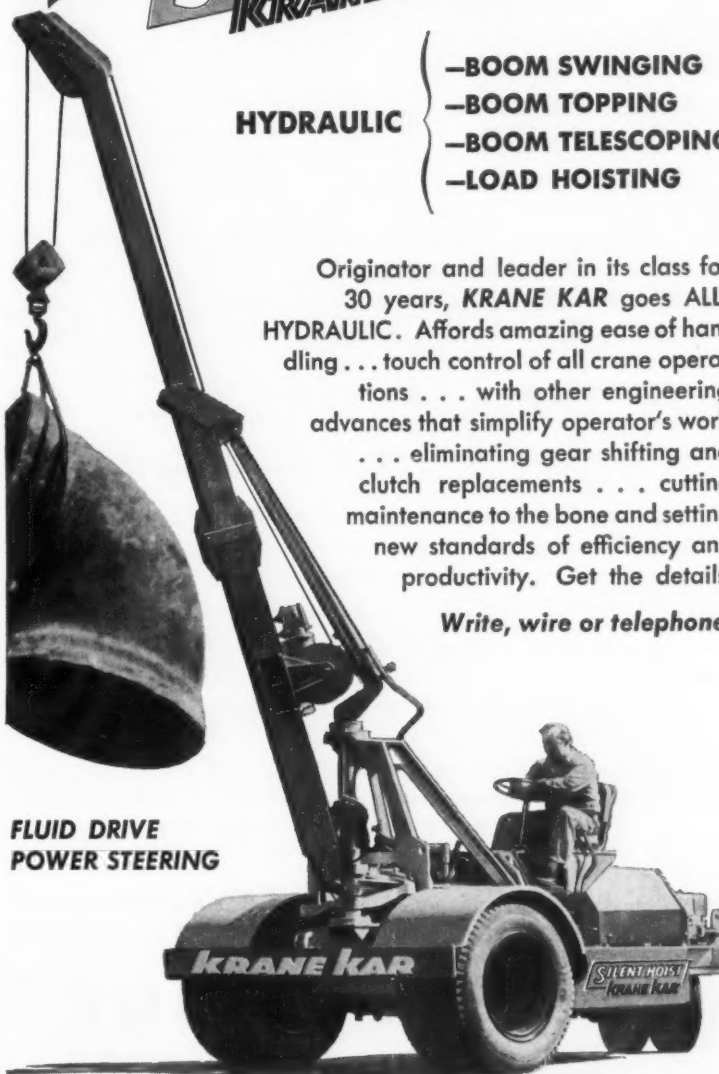
SILENT HOIST KRANE KAR

HYDRAULIC

- BOOM SWINGING
- BOOM TOPPING
- BOOM TELESCOPING
- LOAD HOISTING

Originator and leader in its class for 30 years, KRANE KAR goes ALL-HYDRAULIC. Affords amazing ease of handling . . . touch control of all crane operations . . . with other engineering advances that simplify operator's work . . . eliminating gear shifting and clutch replacements . . . cutting maintenance to the bone and setting new standards of efficiency and productivity. Get the details.

Write, wire or telephone



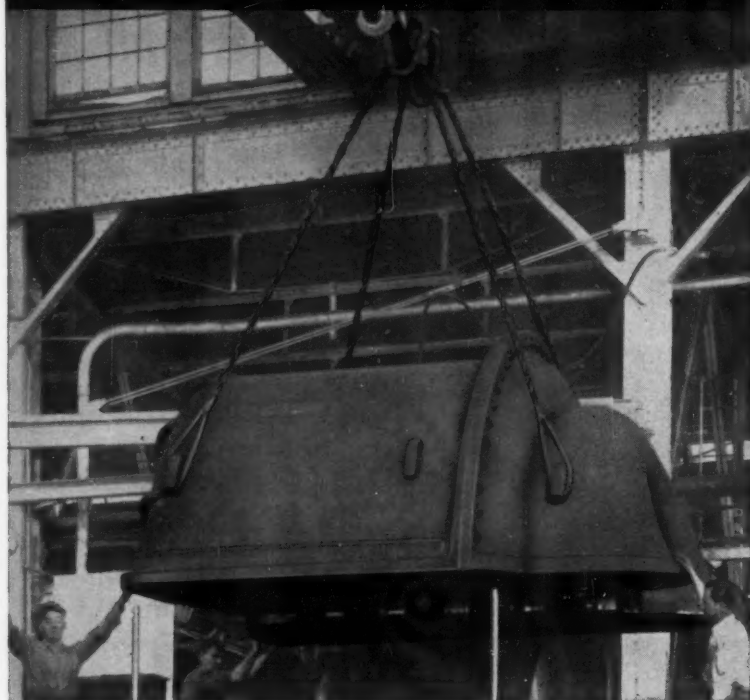
FLUID DRIVE
POWER STEERING

MODELS 1,000 TO 25,000 LBS. CAP.

SILENT HOIST & CRANE CO.
Pioneer Mfrs. of Heavy Duty Materials-Handling Equipment
878 63rd Street, Brooklyn 20, N. Y.

Circle No. 94 on Reader Service Card for more information

you can't bargain with safety...



buy WICKWIRE wire rope slings

The difference in cost between a safe sling and one of inferior quality is trivial compared to the consequences of a sling failure involving injuries to workmen or damage to expensive equipment.

That's why you'll find Wickwire Slings being used on so many jobs where operators don't dare to bargain with safety. For every Wickwire Sling is subjected to rigid tests at every stage of production—from ore to finished product. Wickwire Certified Slings, proof-tested to loads equal to twice their rated capacity, are available at a slight extra cost.

WICKWIRE SLINGS AVAILABLE IN FOUR FABRIC CONSTRUCTIONS

- UNIFLEX®**—Single part wire rope construction
- MULTIFLEX®**—flat braided six part wire rope construction
- MAXIFLEX®**—round braided eight part wire rope construction
- CABLEFLEX®**—cable laid construction

Wickwire also provides a wide variety of end fittings and two different types of mechanical eye attachments. For complete details contact the nearest sales office listed below.



WICKWIRE
WIRE ROPE SLINGS

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

THE COLORADO FUEL AND IRON CORPORATION—Albuquerque • Amarillo • Billings • Boise • Butte • Denver • El Paso
Farmington (N.M.) • Fort Worth • Houston • Kansas City • Lincoln (Neb.) • Odessa (Tex.) • Oklahoma City • Phoenix
Pueblo • Salt Lake City • Tulsa • Wichita • **PACIFIC COAST DIVISION**—Los Angeles • Oakland • Portland • San Francisco
San Leandro • Seattle • Spokane • **WICKWIRE SPENCER STEEL DIVISION**—Boston • Buffalo • Chattanooga • Chicago
Detroit • Emlenton (Pa.) • New Orleans • New York • Philadelphia

Circle No. 20 on Reader Service Card for more information



**Blind Workers Handle
Packaging Operation**
Philadelphia, Pa.—Blind
workers assemble corrugated pal-
lets used by Exide Industrial Di-



vision of the Electric Storage
Battery Company for shipping
batteries. Packaged batteries are
strapped to pallets, making it
possible for fork lift trucks to load
and unload quickly. The pallet
construction project was initiated
by the Philadelphia Association
for the Blind.

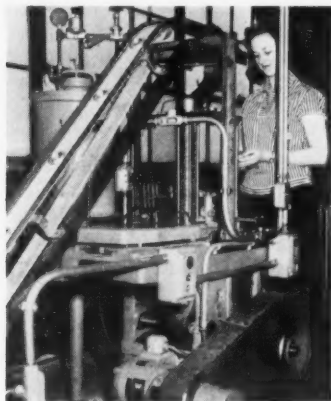
Circle 288 on Reader Service Card

Magnetic Conveyor Is Space Saver

Chicago, Ill.—Production ma-
chines can now be spaced closer
together at a can plant because a
belt conveyor between them was
placed on a steeper incline. This



was made possible by converting the belt conveyor into a permanent magnetic elevator conveyor through the installation of magnetic rails under the ascending



belt. Can tops are fed to the belt, are instantly gripped by a continuous magnetic field acting through the belt, and are automatically discharged to the compound liner and final inspection at a rate of 100 a minute. The magnetic conveyor provides faster, more positive delivery and control of parts, states the manufacturer.

Circle 289 on Reader Service Card

No Pallets For Beer Loading

Minneapolis, Minn.—At the Minneapolis Brewing Company plant, cases of beer are auto-



matically arranged and loaded onto a conveyor without the use of pallets by the installation of a unit loader. The load is then picked up with a pallet clamp on a lift truck. Result: "no-pallet" handling. The unit loader provides fast, efficient stacking. (Example: Two loaders stock-pile at the rate of 70 cases per minute.)

Circle 290 on Reader Service Card

(Continued on page 148)

FIRST... Get the facts about Materials Handling from **DAYBROOK**



• TRANSPORTING AND STACKING FABRICATED ASSEMBLIES



• LOADING—TRANSPORTING—UNLOADING YARD STOCKS



• CAREFUL HANDLING OF LARGE CRATES

POWER LOADER Method brings Speed—Economy to Loading—Unloading Operations

Daybrook Woodside Power Loader loads—unloads up to 4000 pounds in a 360 degree area of the truck. 100% platform area is used for payload. Ideal for palletized yard loads requiring orderly placement for quick inventory. There's never delays awaiting auxiliary loading—unloading equipment. Power Loader equipped with remote control enables one man to do the work of many.

Write for descriptive folder Form BR-PL-57. Address Dept. F-1.



DAYBROOK HYDRAULIC DIVISION

YOUNG SPRING & WIRE CORPORATION, BOWLING GREEN, OHIO

HANDLED WITH CARE!

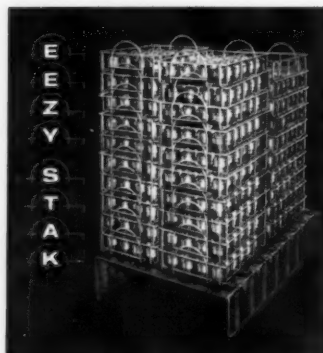


...In Eezy-Stak Parts Handling Containers

You can depend on Eezy-Stak baskets to speed parts processing, reduce rejects and safeguard your man hour investment. Eezy-Staks provide safe, sure protection throughout the entire production cycle. Parts are segregated by means of compartments, hairpin separators or dividers—preventing scratches, abrasions and other handling hazards. Processes such as degreasing, draining, dipping, pickling and drying can be performed without parts removal. Patented "Inter-Lock" handles allow safe stacking, and efficient job-lot transfer.

Custom designed to meet individual handling requirements, Eezy-Stak containers are available in a wide range of sizes and wire diameters. Standard size baskets for bulk parts handling also available. Open mesh construction for full visibility, quick drainage.

Investigate the advantages of Eezy-Stak parts-handling containers for your plant. Send part sample for prompt quotation.



Patented "Inter-Lock" handles allow safe stacking... compact storage—aid in keeping accurate inventories... improve over-all plant housekeeping.

Write today for Bulletin B-54



WIRE & IRON PRODUCTS, INC.

1720 SIXTEENTH STREET • DETROIT 16, MICHIGAN

Circle No. 111 on Reader Service Card for more information

POWER CRANES & SHOVELS ...

(continued from page 64)

tration, depending on the weight per cubic foot, the size and shape of pieces, compaction, etc. This influences the amount of bucket weight required to exert sufficient penetrating forces for a full load.

4. Selection Of The Bucket:

Make certain that the design is best suited for maximum performance, long life and cable economy.

Dragline Attachment on Crane Boom

The dragline bucket attachment consists of a dragline bucket, hoist cable and drag cable, all of which are used with the crane type boom. Operation of the dragline is accomplished by pulling the bucket toward the machine, regulating the digging depth by means of the tension maintained on the hoist cable. When the bucket is filled, the operator takes in on the hoist line while playing out the dragline. This keeps the bucket from dumping its contents until desired.

Consider the following in selecting and sizing a dragline:

1. The size of the bucket.
2. Length and angle of boom should be determined to obtain the required digging and dumping range.
3. Type of material, whether wet or loose, firm and dry.
4. Operating clearances.

Other attachments for the crane-type boom are similar and can be picked by applying most of the check points used in selecting clamshell buckets and draglines.

Next month, Part II, will discuss how you can get more work out of your attachments for power cranes and shovels.

FLOW thanks the following companies for their help in preparing the article. Baldwin-Lima-Hamilton Corp.; Blaw-Knox Equipment Div.; Bucyrus-Erie Co.; Coles Cranes Inc.; J. I. Case Co.; C. S. Johnson Co.; Power Crane & Shovel Assn.; Sauerman Bros. Inc.; Schield Bantam Co., Inc.; Thew Shovel Co.; and Unit Crane & Shovel Corp.

**STRAPPING SYSTEM
STRESSES SAVINGS . . .**
(Continued from page 90)

finished cube.

5. There are four pairs of strapping jigs on each side of the track. Only three of these are normally used; the fourth is available for busy spells. As the kiln car passes the stations, each operator unloads part of its brick. That way the contents of each car get distributed among many cubes, assuring a consistent quality level.

6. Better cube designs were introduced. Existing fork trucks could handle more than the old 343-brick cube, so it was increased to 536 bricks. That cut down the amount of strapping per 1000 brick, reduced necessary floor space some 12 percent, and of course cut the number of handling operations.

7. Two new cube designs, called Contractors' Units, were added to the company's line. One contains 256 bricks (four units of 64 each); the other has 408 bricks (four units of 102 each). These serve a dual purpose; they are large enough to justify handling by powered equipment, and they can be broken down into strapped units small enough for manual handling.

8. New air-powered strapping machines replaced the older ones. They tension the strap uniformly, resulting in packages that stay tight in transit. New strapping was also specified. Though actually more expensive per foot than the old strapping, it is cheaper overall because its greater strength cuts the number of straps from five to four.



OLSON CONVEYORS

Handle Anything...

FROM BAGGAGE

(photograph courtesy
Pan American
World Airways)



TO EGGS



TO EYE WASH



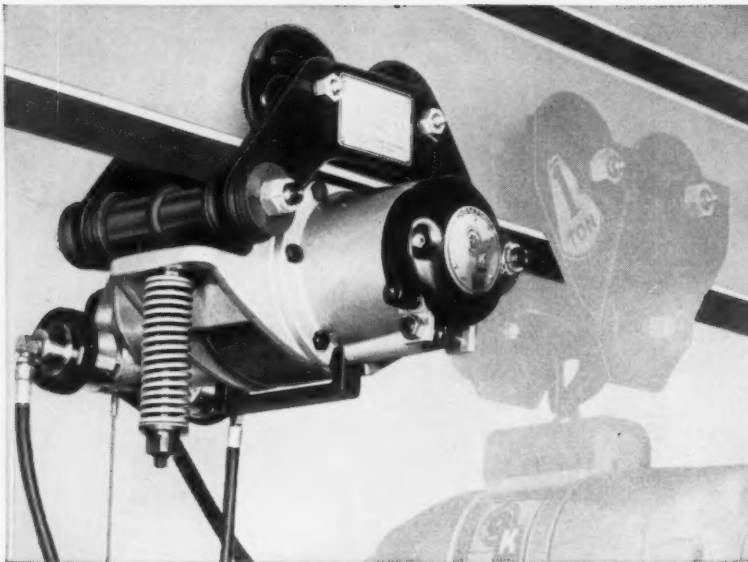
Olson Conveyor installations are at work in many industries, moving and handling the widest possible variety of material quickly, quietly and economically. Olson engineers have been called on to solve thousands of handling problems—moving everything from eggs, to eye wash, to baggage and on up to heavy assemblies through production lines and in and out of storage. If you have a material moving or transfer problem—chances are a conveyor may be the answer. To find out, come to Olson, the Conveyor specialists first.

Olson CONVEYORS

SERVING AMERICAN INDUSTRY SINCE 1900

SAMUEL OLSON MFG. CO., INC.
2426 BLOOMINGDALE AVE.
CHICAGO 47, ILLINOIS
Offices in Principal Cities

Circle No. 158 on Reader Service Card for more information



Now, push-pull power with new **HOISTRACTOR**

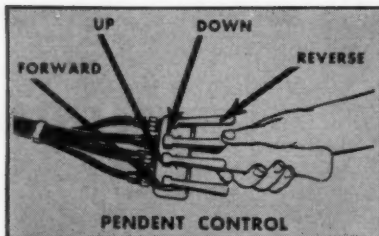
Now, it's an easy one-man, one-hand operation to raise, lower or move loads up to two tons. Simply use the new Keller "Hoistractor." This air-powered hoist trolley, connected to any beam hoist by a drawbar, rides the same beam as the hoist. Hoist lifts and lowers . . . "Hoistractor" moves hoist and load along the beam.

New **HOISTRACTOR** features

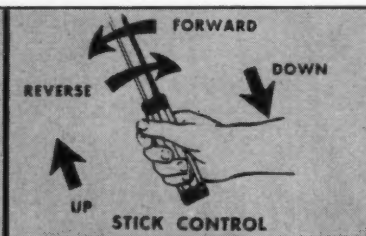
- Fast, safe movement of heavy loads—without operator fatigue.
- Speed variable from slow creep to full-load speed of 70 ft. per min.
- Axial-piston air motor exerts 250-lb. drawbar pull on beam.
- Sensitive air controls permit smooth acceleration and deceleration . . . accurate load spotting.
- Easily adjusted mechanical brake for positive stopping. Brake, not dependent on air supply, is applied automatically in event of air line failure.

Write for Bulletin 87-1.

ONE HAND CONTROL—two types available



Squeeze hand grip has up-down operating levers for hoist and fore-aft levers for "Hoistractor."



Swiveled rod with four-way grip control. Raising or lowering grip raises or lowers hoist load.



ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

GARDNER - DENVER

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Co. (Canada), Ltd.,
14 Curry Ave., Toronto 16, Ontario

Circle No. 120 on Reader Service Card for more information

MECHANIZED DOCK HANDLING . . .

(Continued from page 81)

mechanical dock levelers is probably the way they are raised and lowered. There are two basic systems: 1. Power driven; and 2. Counterbalanced.

Power driven levelers usually rely on hydraulic systems or electrically-driven screw jacks. Some are air powered.

Counterbalanced units get their power from the force of the vehicle backing into the dock. As the truck pushes against an arm at the front of the ramp, the leverage moves the platform until its lip comes to rest on the trailer bed. When the vehicle drives away, pressure is removed from the arm and the platform returns to its normal position.

In counterbalanced dock levelers, we again have two basic types: 1. Those using counterweights to overcome the weight of the platform; and 2. Those using springs for the same purpose. Counterweight models usually have a large block of concrete as the balancing factor. Spring tension models, a recent development in mechanical ramps, use a spring assembly that lets the platform glide up and down with minimum pressure on the bumper arms. Neither requires any outside power other than the force of the vehicle backing into the dock. The most advanced types lock level with the dock when not in use, to permit cross-trucking.

With so many dock levelers being produced (128 different models in 1951), it was inevitable that the manufacturers would eventually band together into a trade association, and the Industrial Lift and Loading Ramp Institute was formed in 1951. The Institute worked hard to adopt a standard for industry, and finally got CS-202-56 approved and published by the U. S. Department of Commerce in 1956. Also as a result of this group's work on standards, manufacturers have cut the number of models being manufactured from 128 to about 37.

**Jack E. Burch, Vice President Industrial Lift Division, Rotary Lift Company, Division of Dover Corporation, Memphis, Tennessee.*

BRAINSTORMING MATERIAL HANDLING . . .

(Continued from page 65)

Invent a test to qualify prospective members . . . Each member to contact five or more prospective members.

Elect officers with ability.

Distribute meeting notices faster.

Encourage vendor support and participation . . . Limit vendor membership.

Make tours of member's plants.

Set up committees to solve technical problems brought to us.

Have more interesting programs at meetings . . . Have more member-and-guest meetings . . . Invite our company's executives to meetings . . . Have a joint meeting with a professional society in another field.

Start a job placement service for members.

Keep colleges up-to-date on developments in our field . . . Send speakers to local colleges.

Brainstorm some local problems . . . Quit brainstorming altogether!

Promote and participate in local exhibits at stores, schools, etc. . . . Sponsor local packaging contests . . . Have members give packaging demonstrations on local television.

Put some emphasis on work instead of pleasure!

What We Can Do For Our Companies . . .

Set up a packaging department in a company which has none.

Help management understand packaging . . . Show management how money is saved by our work . . . Convince management that packaging and handling are tied together.

Write procedures on new methods and techniques.

Teach first-line supervisors about packaging . . . Show the sales group how important packaging is.

Talk cost control through packaging . . . Promote package engineering to the level of product engineering.

Keep our relations with factory people friendly.

(More on next page)

Keep your production



on the move...

RACK MATERIALS HANDLING EQUIPMENT

Increase
production
efficiency
up to 30%

Whether you handle bulk materials, skids, pallets or sheet stock—RACK Pallet Trucks and Tables will give you the mobility you need to keep your production on the go. Moderately priced, RACK Materials Handling Equipment is designed for dependability . . . to give you the means for increasing production efficiency by freeing manpower from unnecessary materials transport time and handling.

TURNABOUT® Hydraulic Pallet Truck



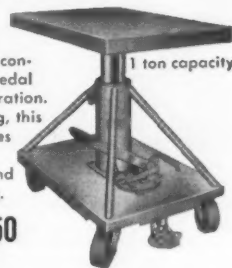
Reliable hydraulic system plus strong, welded construction. 2,500 pound capacity; interchangeable forks.

\$395⁰⁰

Complete truck with 30", 36", 42", 48" forks.

RACK Hydraulic Utility Table

Sturdy all welded construction with convenient foot-pedal hydraulic operation. Smooth-rolling, this table facilitates handling heavy dies and sheet feeding.



1 ton capacity

\$356⁵⁰

RACK Mechanical Pallet Trucks



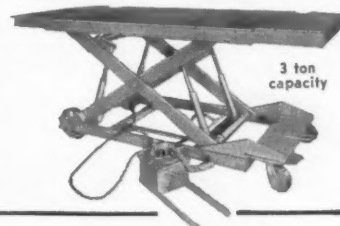
Heavy duty, yet easy to maneuver and lift loads. 1500 pound capacity; all welded, rugged construction; maintenance-free operation.

\$214⁵⁰

for complete truck

Scissors type sheet Feeding Table

Heavy duty table for positioning thick bundles of sheets for feeding to presses, brakes or shears. 18" elevation, 2 speed reliable hydraulic system with foot pedal operation.



3 ton capacity

\$1450⁰⁰

F. O. B. Factory

RACK Hydraulic Equipment Corporation

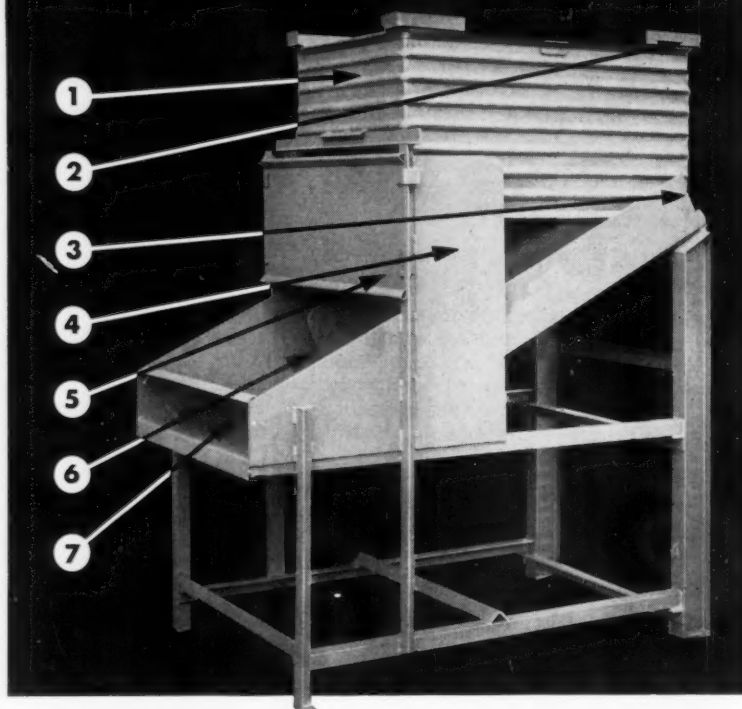
131 Sixth St. • Connellsville, Pa.

Stock Distributors in Principal Cities

Manufactured at: Connellsville, Pa. • Gardena, Calif. • Farnham, Canada • Slough, England

Circle No 80 on Reader Service Card for more information

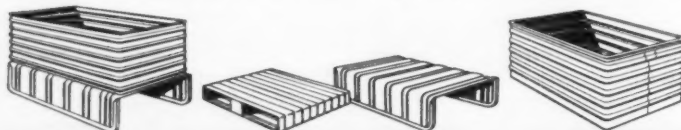
Work-O-Matic* Box and Stand for UNIT LOAD HANDLING AND WORK-LEVEL POSITIONING



Check these 7 Work-O-Matic features

- 1. WORK-O-MATIC DROP BOTTOM BOX.** Heavy gauge corrugated steel construction. Square corners.
- 2. CORNER STACKING ANGLES.** Safe tiering without shifting. Saves floor space.
- 3. HINGED CHUTE BOTTOM.** As forks of truck are lowered, hinged bottom opens and parts slide into tray.
- 4. WORK POSITIONING STAND.** Receives box from back or sides. Safely and easily transported by lift truck.
- 5. CONTROL GATE.** Vertical adjustment controls flow of parts into tray.
- 6. WORK-LEVEL TRAY.** Reservoir feature eliminates work stoppage when changing boxes.
- 7. INCLINED TRAY END.** Assures parts accessibility. Speeds job changes.

In addition, Union Metal offers industry's broadest line of conventional type material handling containers. Write for complete catalog information. Address The Union Metal Manufacturing Company, Canton 5, Ohio.



*Patent No. 2,445,038

UNION METAL
Material Handling Equipment

Circle No. 157 on Reader Service Card for more information

BRAINSTORMING MATERIAL HANDLING

Continued

What Our Companies Should Do For Us . . .

Recognize the professional status of a packaging engineer.

Find better ways to evaluate a packaging engineer's job . . . Hire only well-trained packaging people.

Improve the pay rate for packaging engineers.

Learn about cost savings gained from proper packaging.

Delegate the power to make packaging decisions to packaging men.

Send packaging engineers to all shows.

Have a merit review program for rewarding outstanding work . . . Offer more opportunities to advance in the packaging field . . . Give credit to the good work done by packaging men.

Give the packaging engineer the same status as other engineers . . . Make the packaging engineer part of management.

Listen to employees' suggestions for improving work . . . Pay employees for money-saving suggestions.

Sponsor packaging scholarships at local colleges . . . Donate money to colleges.

Offer plant tours to colleges . . . Send literature to college libraries . . . Provide summer jobs to college students in packaging.

How We Can Reach Young People in School . . .

Work with colleges to set up packaging courses . . . Try to make packaging a major course of study in the industrial engineering field . . . Pioneer new methods of visual education for teaching packaging methods.

Set up scholarships in packaging.

Sponsor college and high school essay contests . . . Sponsor packaging contests in schools.

Tell high school counsellors about the field of packaging . . . Hold career conferences in high schools and colleges . . . Give demonstrations in schools . . .

Emphasize our professional status to schools.

Prepare a library list of packaging handbooks.

Try to get a standard packaging handbook used in schools
Write new textbooks for packaging courses.

Include a handbook booth at shows.

Schedule plant tours for students.

Become advisers in the junior achievement program.

Produce films on packaging for use in high schools.

How We Can Tell Others About Our Field . . .

Publicize the need for men in our profession . . . Make the public conscious of the profession . . . "Glamorize" it.

Put the national show on television Put somebody on "What My Line?"

Publish statistics to show how improved packaging has improved sales. Create a catchy name for our profession and publicize it.

Direct an advertising campaign at management, showing the value of a packaging engineer.

Send a list of career opportunities to the local Chamber of Commerce.

Place more advertising in trade magazines . . . Place more advertising in consumer magazines.

Write a book called "The History of Packaging."

Publish case histories of successful packaging ideas . . . Publish stories about successful men in the profession.

The brainstorming ideas you have read should be evaluated and—this is the hardest part—acted upon. Deciding how to make a good idea work is the most difficult step to take in the brainstorming process. A suggestion for making the job easier: Try brainstorming the individual idea for suggestions on the best way to carry it out.

For more information on advertised items and new products and literature, use the handy reader service card on pages 35 & 36.

Ask Standard

*how to
cut costs with
conveyors*



Dallas department store slashes time lag between receipt and sale of goods

In 1955, Titche-Goettinger modernized their receiving and shipping departments with Standard Roller Conveyors. As in so many other cases, the move is paying off handsomely—in terms of simplifying handling and storing, in time and manpower savings. Based on two years' operation, here's Traffic Manager L. V. Nicewarner's evaluation...

There has been absolutely no maintenance problem, and the equipment will undoubtedly be in as good condition ten years from now as it is today. And through its use, we've been able to implement a more orderly procedure for the careful checking and marking of incoming merchandise and reduce the time lag between the receipt and sale of goods. We're well pleased with the equipment and its installation.

L. V. Nicewarner

L. V. Nicewarner
Traffic Manager



Call the Standard engineer listed in your classified phone book or write direct. Ask for Bulletin 68, address Dept. A-2.

It pays to put Standard's 50 years of conveyor building and application experience to work in your business... get a system job-tailored to your specific needs. STANDARD CONVEYOR COMPANY, General Offices: North St. Paul 9, Minnesota. Sales and service in principal cities.



Circle No. 96 on Reader Service Card for more information

Walkie or Small Rider MOTO-TRUCS COST LESS ...to buy...to operate

■ You can buy MOTO-TRUCS at prices well below those of other comparable models.

Yet, in spite of their lower first cost, MOTO-TRUCS provide greater material handling efficiency at lower operating cost than competitive trucks.

This important two-way saving is the direct result of simple, rugged construction... the use of sound engineering principles — free of complicated mechanisms, fancy gadgets and frills which simply add to the price and are costly to maintain, but add nothing to the efficiency of the truck.

Because MOTO-TRUC is the world's largest manufacturer of walkie and small rider type trucks, you can be sure there is a model to meet your handling needs. Be sure to investigate this money saving line of battery powered industrial trucks before you buy.

- MOTO-TRUC builds a complete line of pallet trucks, low and high lift platform trucks, fork trucks, outrigger trucks, straddle trucks, tractors and special models. Write for complete information.



Ask for:
Catalog 56W on
walkie trucks
Catalog 56R on
Ride-A-Man models

Largest Exclusive Manufacturers of
"Walkie" and "Ride-A-Man" Trucks.

The MOTO-TRUC Co.



1955 EAST 59th STREET • CLEVELAND 3, OHIO



New EQUIPMENT SECTION



Truck Loader Is Portable

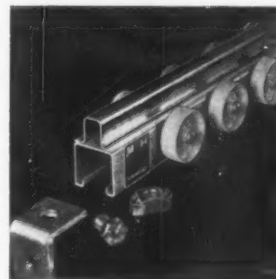
The Rapid-Loader "Express" is a portable loading device produced by the Lodge Manufacturing Corporation. It can be moved by one man to the loading site; then the platform is loaded and raised hydraulically to truck height. The "Express" can also be used as a portable bridge (it is available in capacities from 1½ to 6 tons). Its tilting bridge plate allows it to compensate for height differences between truck and dock when used as a portable ramp. It can also serve as a side-loading material handler or hydraulic lift table.

Circle 169 on Reader Service Card

Live Storage Rack Has Plastic Wheels

A Versarack live storage rack with plastic wheels has been developed by the M-H Standard Corporation. Wheels are molded of a high impact plastic and are interchangeable with the zinc-plated bearing steel wheels furnished on standard Versaracks. Wheel diameter and width of tread are large, for minimum indentation of soft packages; wheels are free-turning and require no lubrication, says the manufacturer. Rails have built-in dividers to separate rows of packages in the rack. Strength of rails is high enough to permit full 10-foot spans.

Circle 170 on Reader Service Card



Molded Cushioning Without Molds

Inexpensive cushioning for delicate products of all sizes and shapes is available with FiberKor, introduced by Fiberbond Corporation. Your products are sandwiched between two layers of crimped, non-woven, synthetic fibers bonded to a single-faced corrugated board. The material has been tested and approved for industrial and Air Force Packaging, and complies with specifications of MIL-P-116. It is scratchproof, dustproof, non-corrosive, practically neutral in PH, low in moisture absorption and highly resilient. FiberKor is available in rolls or sheets of various sizes, in various thicknesses.

Circle 171 on Reader Service Card

For Weighing and Transporting

Shaw-Box Crane and Hoist Division of Manning, Maxwell & Moore, Inc. is marketing a line of MMM Load Scales. These units are designed to combine weighing and handling into one operation. The MMM is accurate to within .2 of 1 percent of the full scale reading, says the manufacturer. The mechanism is sensitive to weight changes of less than ½ of one division. A safety application of this type of scale is its use as a checking device against overloading of hoisting equipment. The MMM weighs only 42 pounds but is constructed to withstand rough usage, it is claimed.

Circle 172 on Reader Service Card



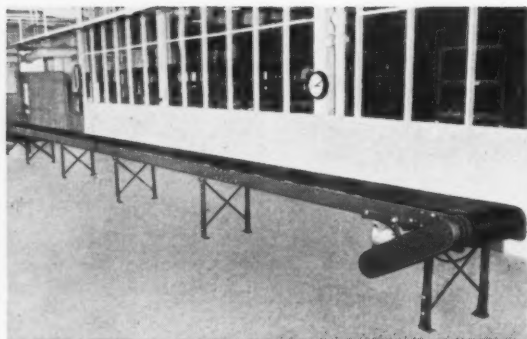
NEW EQUIPMENT SECTION



Safety Release for Carts:

A double-faced cam coupling mechanism designed to permit quick-release from either side of dragline carts is being manufactured by SI Handling Systems (a division of Safety Industries Inc.) Cam slants to center from both sides; to release tow pin, the operator turns a cam handle towards himself, from either side of the truck. Safety feature in this operation is that operator does not have to cross in front of the moving cart. The manufacturer states that the pins used in this coupling are specially hardened to withstand prolonged rough usage encountered in warehousing, manufacturing, and freight handling. Protection for the cam coupler is provided by the use of round-corner decks (available as optional equipment on dragline and manual carts). The front deck on round-corner carts projects beyond the coupler pins and acts as a bumper to protect the pin from damage. In operating position, the pin passes through the front channel and rides between the wheels. In raised position, the pin is maintained at a constant height between the wheels, thus eliminating pin drag when passing over dock plates or other obstacles.

Circle 173 on Reader Service Card



Conveyor Assembled On the Job

A. B. Farquhar Division, The Oliver Corporation, has designed a line of package handling power-belt conveyors with the viewpoint of simplified assembly. A slider bed type (Model 536) and a roller bed type (Model 538) are available. The manufacturer indicates that components are constructed so that the conveyor (or conveyor line) can be assembled on the job with hand tools. The Model 536, in horizontal installation, will handle loads up to 75 pounds a foot on standard 10-foot centers. Model 538 can handle up to 100 pounds a foot in horizontal service.

Circle 174 on Reader Service Card

Cleans Up the Snow:

Krause Industries manufactures a snow blower now available on Clark Equipment Company's "Michigan" Models 75A, 125A and 175A tractor shovels. The attachment is mounted on the same pins as the standard bucket and can be hooked up or detached in minutes. Weight of the unit is less than a heaped bucket so there is no strain on the boom arms, states the manufacturer. Snow and ice control problems can be handled two ways: 1) by use of the standard bucket, snow can be loaded into 8-foot-high haul trucks; 2) by use of the blower, snow can be heaped into higher, sideboard-equipped trucks. Heavy windrowed snow can be loaded into trucks at a rate of 12 cubic yards a minute, it is said. High horsepower is not needed with the Sno-Thru unit, since it operates with a large rotor (38 inch diameter, weighing 150 pounds) that travels at 400 rpm and throws the snow. The attachment is available with two different type hoods: one has a 360-degree rotation which is reversible and can be controlled from the cab. The other is manually controlled.

Circle 175 on Reader Service Card



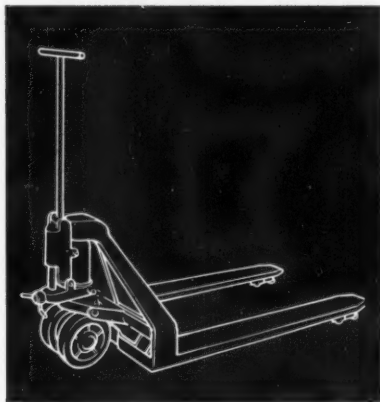
Circle No. 78 on Reader Service Card for more information

★ 4,600 POUNDS
CAPACITY

PALITON

★ FULL FIVE-INCH
LIFT

HYDRAULIC HAND PALLET TRUCK



THREE STROKES OF HANDLE
LIFT PALLET FREE OF FLOOR

USED IN ALL ROLLS ROYCE
PLANTS—HERE'S WHY.

- ★ RUGGED CONSTRUCTION
FOR HEAVY DUTY
- ★ LIGHT WEIGHT FOR EASY
MOVEMENT
- ★ CARTRIDGE VALVES INSTANTLY
CHANGED FOR SERVICING
- ★ AUTO SAFETY RELIEF VALVE
- ★ 6000 LB. TESTED
- ★ GREASE GUN LUBRICATION
- ★ ROLLER AND BALL BEARINGS
EVERYWHERE
- ★ 90 DAY GUARANTEE

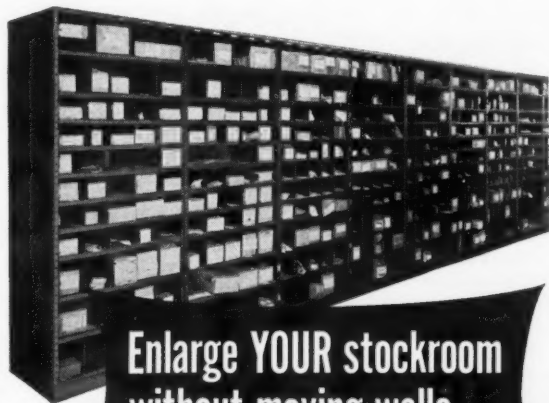


FOR SERVICING H.D.R. ULIC UNIT
IS INSTANTLY REMOVABLE BY
UNDOING ONLY TWO NUTS

MADE IN ENGLAND BY
OMIC LTD.
LONDON

Sold and serviced in U.S.A. by
PALTIER CORP.
1701 Kentucky St., Michigan City, Indiana
AND AVAILABLE ALL DEALERS

IN CANADA FROM
ELECTRO-HYDRAULICS (Canada) LTD.
18 INGRAM DRIVE
TORONTO 9.



**Enlarge YOUR stockroom
without moving walls**

You can custom design storage facilities to suit your exact needs—with Equipto Steel Shelving Units. Eliminate "dead areas" and unnecessary bulk . . . enlarge your stocking area . . . accelerate stock handling.

Available in all sizes, either open or closed . . . dividers, panels, label holders, bin fronts, and drawer sections may be added or rearranged at any time. For further details on shelving and other Equipto products write for free 16 page booklet No. 256, "Short Cuts to Greater Profits."

Equipto

805 Prairie Avenue
Aurora, Illinois

STEEL SHELVING . . . PARTS BINS
. . . LOCKERS . . . DRAWER UNITS . . . CARTS . . . WORK BENCHES.

Circle 29 on Reader Service Card for more information
FEBRUARY, 1958

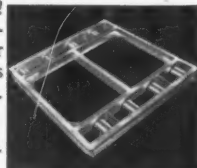


Pallet Load **MOBILITY**

... WHEN YOU NEED IT... WHERE YOU NEED IT!

Magliner Magnesium Pallet Dollies keep pallet loads moving—stock movement fluid. They pay for themselves quickly by freeing men and power equipment from short-haul loading operations. Eliminate bottlenecks . . . lower loading costs!

Magliner pallet dollies are magnesium light, easily carried back to the loading point, fast—by one man! Large 3 1/4" rollers for free rolling movement. Rugged, welded construction for dependable long-life service. Capacities to 4,000 lbs. 14 standard models and sizes.



Write for Bulletin P8-1

MAGLINE INC., P. O. BOX 222, PINCONNING, MICH.
Canadian Factory—Magline of Canada Ltd., Ramtown, Ont.

MAGLINER MAGNESIUM PALLET DOLLIES

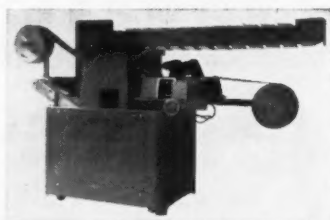
Circle 64 on Reader Service Card for more information

NEW EQUIPMENT SECTION

For Adjustable Package Sizes

Pak-Rapid packaging machines automatically form, fill and heat seal pouch type packages of any kind of flexible packaging material. In addition, attachments are available for automatic feeding, printing, counting and air removal. The operator can adjust for varying package size quickly and easily, within ten or 15 minutes, without removing any parts from

the machine. The manufacturer, Pak-Rapid, Inc., says the machines



can package any product up to 1 1/4 inches thick, if it is within proper physical dimensions.

Circle 176 on Reader Service Card

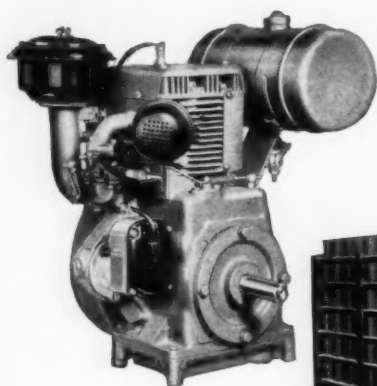
Double-Decker Cart

The Model PCX-400 cart was designed by McClintock Manufacturing Co. for assembly line work.

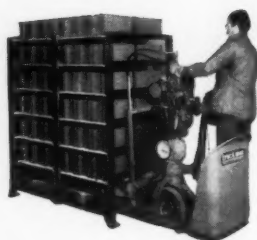


It's top working surface is large enough to hold a variety of small parts containers; the lower platform holds larger components. Corner posts are eliminated for easier loading and handling. Top and bottom corners are rounded to prevent personnel injury.

Circle 177 on Reader Service Card



full time
POWER



**at its
BEST**

Builder of
"Truck-Man" is
The Knickerbocker Co.,
Jackson, Michigan.

WISCONSIN-POWERED Equipment

Kalamazoo
Manufacturing
Co.,
Kalamazoo,
Mich. is
the builder.



The equipment you see here works *full time* on many different material handling assignments. Each husky Wisconsin Heavy-Duty Air-Cooled Engine works Full Time, too... day after day, month after month, with minimum servicing.



Builder is The Buda Co.,
div. of Allis-Chalmers Mfg. Co.,
Harvey, Illinois.

While heavy duty features are responsible for this kind of *workability*, there's a more basic reason for the success of Wisconsin Engines. Long ago, Wisconsin Motor Corporation decided to build

only air-cooled engines. No other products would be developed that might draw attention from this one single goal.

The plan was sound, for from these undiverted skills and know-how has come a line of engines, unmatched in features, unmatched in *full time power delivery* in the 3 to 56 hp. range.

Write for bulletin S-223, describing all models.



WISCONSIN MOTOR Corporation

World's largest builders of Heavy-Duty Air-Cooled Engines
Milwaukee 46, Wisconsin, U. S. A.
2,000 SERVICE STATIONS... SEVERAL NEAR YOU

A8-6161-V6I

Circle No. 112 on Reader Service Card for more information

"Hook On" Loading Ramp

A pre-fabricated loading ramp and an automatic gate are recent



additions to the line of accessories for Buck Portable Hoistowers, manufactured by the Buck Equipment Corporation. The ramp hooks on—no nuts or bolts are needed. Two men can quickly install it on either side of trailer-mounted Hoisttower base; the ramp remains in place as platform raised or lowered. The automatic gate closes when the platform is raised, opens as it is lowered. It has been designed to fit existing platforms and is available for new Hoistowers.

Circle 178 on Reader Service Card

High-Speed Production Feeder

The Feedall Model 3000 feeds rolling or sliding parts in various lengths and diameters automatically and at continuous high-pro-

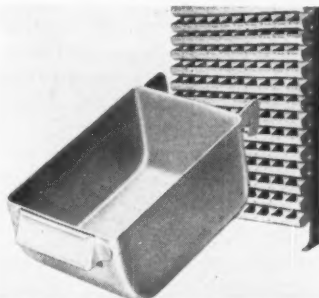


duction speeds, according to the manufacturer, Feedall, Inc. The machine handles rolling parts up to 5" in diameter and 2½" long. The automatic elevating feeder picks up parts from the loading hopper, carries them to desired feed height on the elevating conveyor, and feeds them properly oriented in the production unit (centerless grinder, milling machine, induction heater, etc.). The Model 3000 is self-contained and has a ¾ hp, totally enclosed ball bearing motor.

Circle 179 on Reader Service Card

One-Piece Design for Bin

A one-piece, multi-purpose parts bin has been produced by Service

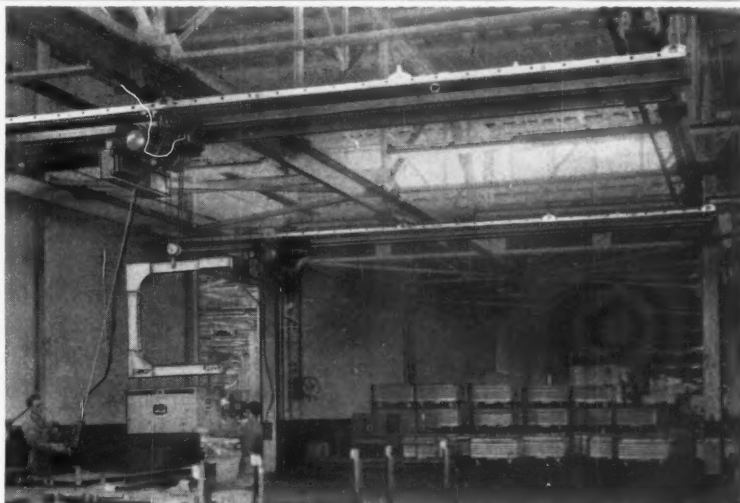


Parts Systems, Inc. Made of 20-gauge drawn steel, the unit is leak-proof and rust proof. The manufacturer points out that a newly designed label holder makes parts identification easy. This bin fits a wide range of standard and custom racks for use on assembly benches, as bin-end units, wall units, and mobile floor units.

Circle 180 on Reader Service Card

Versatile Tractor

The 330 Utility is a wheel tractor manufactured by International



Courtesy Fisher Body Division, General Motors Corporation

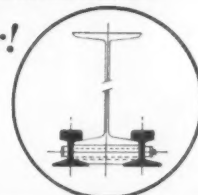
92 ABELL-HOWE CRANES

for automobile body builder!

Specifically, seventy 10-ton cranes, ten 5-ton cranes and twelve 2-ton cranes... serving the receiving, production facilities, storage, maintenance and repair, and shipping areas in two separate plants.

The entire job was completed in good order—equipment was accepted promptly upon completion, and there have been no reported cases of malfunction.

Granted, Abell-Howe does not write orders like this every day. In fact, our business has been built on the satisfaction of single crane buyers. Point is, these cranes were purchased in quantity simply because Abell-Howe has the quality construction as well as the conservative price!



Abell-Howe 10-ton crane bridges at Fisher Body are specially designed with Timken bearing equipped flat tread wheels operating on 160# ASCE crane rails fastened to lower flange of I-beam runways...no better design for heavy service!

SEND FOR BULLETINS



S-103 SINGLE GIRDER CRANES
Underhung and Top-Running models. Cap. 2,000 to 10,000 lbs.

C-103 CRANEMASTER CRANES
4 basic types to suit all building conditions. Cap. 3 to 20 tons.

**ABELL-HOWE
COMPANY**

7747 W. Van Buren St. Forest Park, Ill.

Circle No. 160 on Reader Service Card for more information

NEW EQUIPMENT SECTION

Harvester Company. It delivers an estimated 35 horsepower at the



belt for handling heavy-duty back-

hoes, hoisting 4,000 pound loads with a fork lift, or lifting 1,250 pound loads with a front-mounted loader. Over 35 types of utility equipment are available for this unit, ranging from backhoes, blades and loaders to mowers, snow plows and sweepers. Many items of Fast-Hitch equipment have been designed to enable operators to perform a variety of utility jobs with a minimum amount of changeover time.

Circle 181 on Reader Service Card

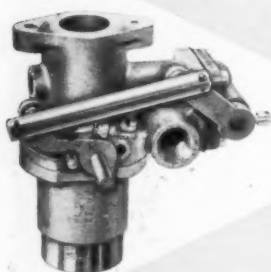
For Precision Measurement

Two traction-type dynamometers have been developed by W. C. Dillon & Co., Inc. One



has a capacity rating of 0-5,000 pounds and the other, a rating of 0-10,000 pounds. The instruments are designed for precision measurement of torque, weight, tension, traction or compression. According to the manufacturer, the unit is unaffected by extreme temperatures and can sustain accidental overloads of 25 per cent without injury.

Circle 182 on Reader Service Card



Convert lift trucks to

Century

LP-Gas Carburetion

SELECTED BY

TOWMOTOR

THE ONE MAN GANG



Towmotor

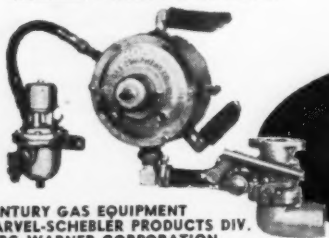
for the popular
Model 350

CENTURY PROVES BEST for Towmotor's LPG Model 350 Lift Trucks ...best in performance...best in fuel economy...and best in compact design.

Century proved its performance and efficiency to this outstanding leader in the industrial truck field through a series of laboratory and field tests.

Now as factory standard on this popular Towmotor model, you will see the complete Century Carburetion system consisting of a Model 3C-702 Carburetor, Model H Converter and STF-1614 Filter-Fuellock.

Follow the lead of the big manufacturers, when converting lift trucks and other motorized equipment to LP-Gas—select Century LP-Gas Carburetion for top performance. Write for brochure.



CENTURY GAS EQUIPMENT
MARVEL-SCHLEIBER PRODUCTS DIV.
BORG WARNER CORPORATION
625 Southside Dr., Decatur, Ill.

CENTURY

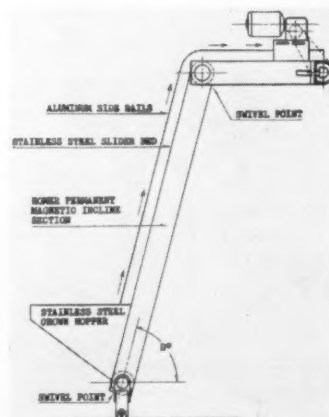
LP-GAS CARBURETION



Circle No. 18 on Reader Service Card for more information

Magnetic Conveyor for Bottle Capping

A magnetic conveyor has been designed by the Homer Manufacturing Division of the Ohio Elec-



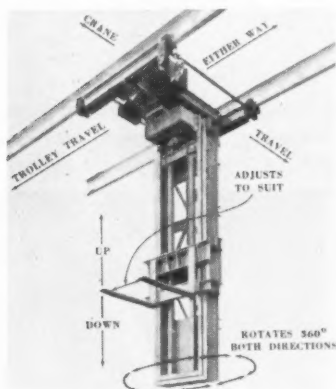
tric Manufacturing Company for use with filling and capping machinery in bottling industries. The unit will automatically and sanitarily handle bottle crowns without damage to the crowns, according to the manufacturer, Bottle

crowns are loaded into the conveyor hopper at floor level; the conveyor elevates them to a top horizontal conveyor section which delivers them to the center of the capping equipment hopper. This unit eliminates the necessity of the operator loading the capping equipment hopper from an elevated platform, thus increasing his safety.

Circle 183 on Reader Service Card

Overhead Fork Lift

Cleveland Tramrail Division, The Cleveland Crane & Engineering Co., has developed a heavier,

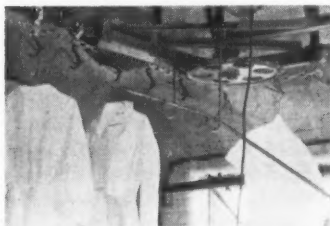


more versatile overhead fork lift. It can be traveled to front, rear, or either side of a building; up, down; turned through a full circle clockwise or counterclockwise. The overhead fork lift is particularly advantageous for handling materials in warehouses; it is claimed that the storage capacity of a building is increased by 25 to 100 per cent. Capacity of telescoping type (illustrated) is 5000 lb.; of non-telescoping type, 600 lb.

Circle 184 on Reader Service Card

Custom Carriers

Custom-engineered carriers, hooks, or hangers are available



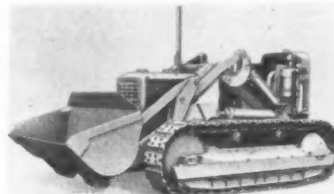
with the pre-engineered Trol-e-veyor manufactured by The Alvey-Ferguson Company. Carriers can

be developed which will automatically pick up and discharge loads, automatically route items to different destinations, and accomplish other functions, it is claimed. (The illustration shows a Trol-e-veyor installation in a laundry, automatically routing garments to different destinations, depending on the way the garments are hung on the conveyor.) Trol-e-veyor uses mass-produced standard components, and can accommodate loads up to 160 pounds.

Circle 185 on Reader Service Card

Handles Tough Jobs

Two Traxcavator models—No. 955 (Series E) and No. 977 (Series E)—have been engineered



to meet the rugged operating conditions imposed by such jobs as quarry and logging work. The ma-

**"THE
ROLLWAY
DOCK
PLATE
CUTS
HANDLING
COSTS!"**

Precious time is saved on your loading dock with the all steel Rollway Dock plate. One man easily and quickly wheels it in and out of position. Handles and wheels fold completely out of the way when in use. Safety pins keep it from slipping. You get the advantage of a rugged heavy steel dock plate that can really take it . . . yet can be moved in seconds by one man.

ORDER DIRECT FROM FACTORY . . . write now for illustrated literature and prices on the many different sizes and models of the Rollway Portable Steel Dock Plate.

Some Territories Open for Representatives

WOODFORD MFG CO

1636 DELAWARE AVE.

DES MOINES, IOWA

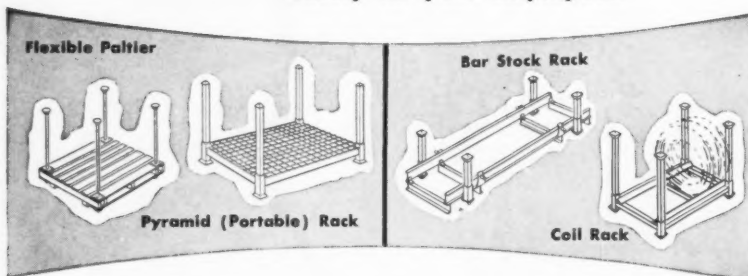
Circle No. 144 on Reader Service Card for more information

PALTIER SYSTEMS are Best...

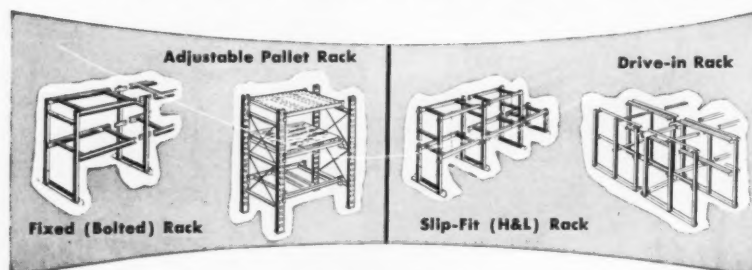


INCREASE YOUR PROFITS

and provide maximum
safety for your employees.



PALTIER engineering has developed storage systems for practically every storage requirement, proving that PALTIER'S experience has no peer.



There is a PALTIER SYSTEM
designed especially for your plant.

Stacking Hardware for Standard Pallets.



Circle No. 119 on Reader Service Card for more information

NEW EQUIPMENT SECTION

chine, manufactured by Caterpillar Tractor Co., features a strong undercarriage, with heavy construction incorporated into all undercarriage parts, track roller frames, sprockets, front idlers, track rollers, and track carrier rollers. The No. 977 includes a 40-section track group with 18" flat shoes, and a special low-speed transmission to match the rugged conditions under which the machine will operate.

Circle 186 on Reader Service Card

Tongs for Lifting

Two sizes of non-automatic tongs for lifting round and odd shapes are produced by Heppen-



stall Company. They are intended for applications where there is a limited amount of lifting and inexpensive tongs are adequate, states the manufacturer. The 750-pound capacity tongs have a maximum opening of 9¾ inches and will accommodate rounds from two to nine inches in diameter. The 1,000-pound capacity tongs have a maximum opening of 12¾ inches, and will accommodate rounds from four to 12 inches in diameter.

Circle 187 on Reader Service Card

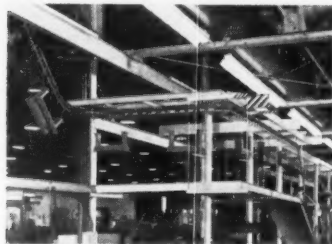
Tape for Safety

Westline Products Division of Western Lithograph Company manufactures an industrial hazard-marking roll tape. Named "Hazardstripe", this tape is printed with yellow and black stripes for use in any potential accident area.

Circle 188 on Reader Service Card

For Light Overhead Conveying

Mathews Conveyor Company produces the No. 232 light-duty trolley conveyor. Assembled from



standard parts, this unit features standard vertical bends that are made in 2', 4', and 6' radii. Sprocket turns are available in 30, 45, 60, 90, and 180 degree units. The sprocket drive units have capacities ranging from 350 to 750 pounds and horsepower ratings from 1/4 to 2. The conveyors can be driven at speeds ranging from approximately 1 to 50 fpm.

Circle 189 on Reader Service Card

Mass Produced Wire Partitions

Standard wire-mesh partitions, fabricated through mass production techniques, are offered by Wire and Iron Products, Inc. Each



panel is a complete unit, interchangeable and movable; it can be assembled and installed by plant workmen. They are reusable, and can be disassembled and relocated as plant layout changes require. Available in two types of construction—all mesh and mesh-with-steel base—the panels can be supplied as standard units eight feet high and in widths of four or five feet. Standard top panels are available for increasing overall height to 9, 10, 11 or 12 feet.

Circle 190 on Reader Service Card

Circle No. 136 on Reader Service Card for more information



#500
STACKING
BOX

TOTELINE of fiber glass reinforced plastic



#472 WITH
MOLDED-IN
HANDLES

Here are just two small-parts boxes in the large line of Toteline fiber glass stacking boxes, all offering these advantages:

- Light but strong
- Easy to clean
- Constant tare
- No maintenance
- Chemical resistant
- No sharp edges, corners
- Wire reinforced edges
- Available in colors

Write for catalogs or describe your specific handling problem.

MOLDED FIBER GLASS TRAY CO., LINESVILLE, PA.

OFFICES IN PRINCIPAL CITIES AND CANADA

World's largest producer of reinforced plastic trays and toteboxes

The BECO

SUPER-LIFT LEVER DOLLY

LENGTH	LIFT	SHIPPING WT. (pair)	POUNDS CAPACITY	PRICE (ea.)
4' 8"		36	3000	16 ⁰⁰
5' 8"		62	3750	17 ⁰⁰
6' 8"		76	4500	18 ⁰⁰
7' 8"		88	5250	19 ⁰⁰

Rubber or Metal Wheels
Immediate Delivery

WRITE FOR
QUANTITY
DISCOUNT
SHEET

BECO - Bettendorf, Iowa

Circle 86 on Reader Service Card

REVOLVATOR GO-GETTER
The MOST COPIED
LIFT TRUCK
On The Market

EASIEST WALKIE-TRUCK TO OPERATE AND MAINTAIN EVER!

FINGER-TIP CONTROLS, INCLUDING DYNAMIC BRAKE TO ELIMINATE "PLUGGING" THE MOTOR GOING DOWN RAMP, AND "ARTICULATED" CONSTRUCTION ADJUSTS TO UNEVEN FLOORS. STEERS EASILY, AND WORKS IN LESS SPACE BECAUSE OF THE DUAL WHEELS & DIFFERENTIAL DRIVE!

HOW ABOUT MAINTENANCE? SNAP THE LATCH AND LIFT OFF THE COVERS—YOU DON'T EVEN TAKE THE MOTOR OUT TO GET AT THE BRUSHES, AND THE DISK BRAKE HAS A SIMPLE SCREW ADJUSTMENT

WRITE FOR OUR
FREE TRUCK INDEX
OF GO-GETTER ELECTRIC AND RED GIANT HAND LIFT TRUCKS

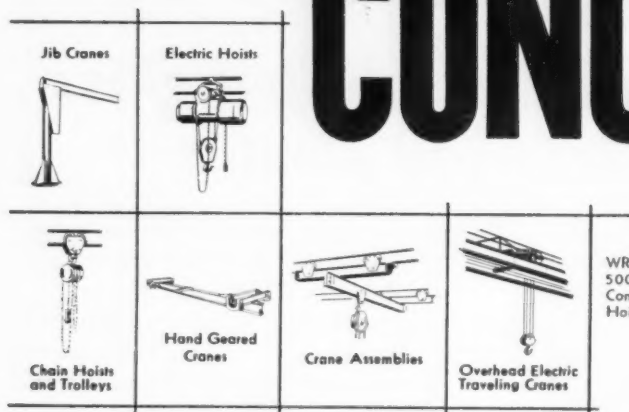
REVOLVATOR CO.

Circle 146 on Reader Service Card

lifting problem?

tell it to

CONCO



WRITE for Bulletin 5000A covering Conco Cranes and Hoists

CONCO ENGINEERING WORKS

Division of H. D. Conkey & Company, Mendota 38, Ill.

AFFILIATE:

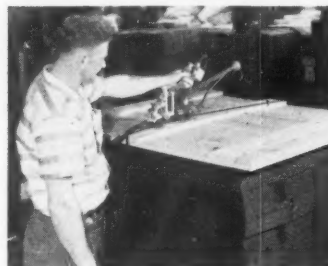
Conco Building Products, Inc. - Brick, Tile, Stone



NEW EQUIPMENT SECTION

Electric Strapping Machine

An electric power strapping machine, said to be the first of its kind, is being manufactured by



Signode Steel Strapping Company. The Model AE uses a 115 V motor to provide unvarying tension at the touch of a button. A single-stroke hand lever seals and cuts the strap. This device is a portable power strapping tool, weighing only two pounds even with 75 seals in its magazine. Calibrated tension is set and held by light wrench pressure on a hex knob.

Circle 192 on Reader Service Card

PLANTMAN

Power Sweeper
as low as \$330.

- Gasoline powered. Sweeps up all sorts of dirt and trash.
- Time and money saving. Up to 16 times faster than push-broom cleaning.
- Highly efficient and maneuverable. Gets right up to walls, boxes, machines, etc.
- Simple and easy to use. Nothing complicated to get out of order.
- Unlimited applications.



Available with or without power drive.

Time and motion studies have proved that the Plantman Sweeper cuts floor cleaning costs. Thousands of these low-cost units are in constant use in all types of businesses all over the world. Write for free Floor Cleaning Planning Guide and complete Plantman details.

Plantman
Products of

Handling Devices Company, Inc.

Sweeper Division,

430 Pearl Street, Brookline 47, Massachusetts

Circle 43 on Reader Service Card for more information

dependable



ANCHOR CONVEYOR TROLLEYS

Engineered for longer life and greater economy, ANCHOR Improved Conveyor trolleys are backed by 30 years of conveyor experience.

These trolleys are interchangeable with other leading makes, have protected lubrication fittings, baffle type grease seals, hardened and ground races, and caged ball bearings. Write for Bulletin 56-2.

ANCHOR STEEL & CONVEYOR CO.

6906 KINGSLEY AVE. DEARBORN, MICHIGAN

Circle 5 on Reader Service Card for more information

FLOW

Rack Unloader Used with Crane



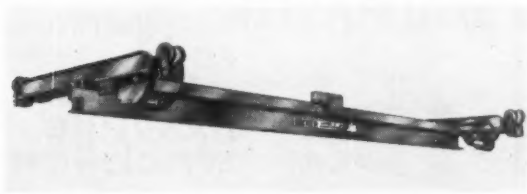
An extension unloader unit has been developed by The Rapid-Standard Co., Inc., to allow material to flow far enough out of a rack to allow use of an over-head crane. This device makes it possible to use the firm's Flow Rack for

point-of-use storage of materials that are too heavy for manual handling; it has been particularly successful when used to remove tote boxes (of metal parts) from a rack. The extension unit consists of a short section of conveyor track matching the Flow Rack track; it can easily be attached to any hatch opening in a Flow Rack unit. A hand lever lifts the tote pan above the end stops so that the pan can glide onto the track extension, making it accessible to the hoist.

Circle 193 on Reader Service Card

Under-Running Crane Is a Package Unit

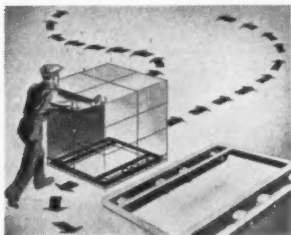
Becker Crane & Conveyor Company has a line of heavy duty under-running cranes with capacities from 1 to 10 tons. This line includes hand propelled and motor driven models for spans up to 50 feet. The cranes are designed to operate on the lower flange of two parallel runways and may be equipped with interlocking devices which allows the hoist to leave the bridge to carry loads to another crane or monorail. The crane assembly is a package unit, from which the



motor drive can be conveniently removed for maintenance. It is also possible to convert hand propelled models to power operation in the field.

Circle 194 on Reader Service Card

Moves Pallets Any Direction



A palletized load can be given 360 degree directional movement by the use of Ace "Swivel King" pallet rollers manufactured by the Frank L. Robinson Co. Moving on heavy gauge, large diameter rolls, these

units will facilitate material flow on production lines and in shipping, receiving, and warehousing. Their "equalizer" design retains parallelism and alignment of frame under all conditions, says the manufacturer.

Circle 195 on Reader Service Card

Low Cost Way to Dump and Store



New Model FIA Pallet Type Phil-Dump

With the use of a lift-truck, a large variety of bulk materials are easily loaded and dumped or stacked and stored with this new labor-saving Phil-Dump. Redesigned to avoid spillage, this money-saving device boasts the sturdy construction for great durability for which all Phillips equipment is famous. Features are a non-slip pallet slot and a patented safety lock which permits automatic but not accidental dumping. Capacity is 1 cu yd. Send order to Salem-Brosius.

SALEM-BROSIUS, INC.

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PHILLIPS MATERIALS-HANDLING EQUIPMENT

Manufacturers Since 1863

Circle 156 on Reader Service Card for more information

Circle 49 on Reader Service Card for more information

JAKES

**America's Finest
Industrial Trucks and Trailers**

MODEL TT-16
All Purpose Truck

- For
- Conveyor Operation
 - Tractor-Pull Operation
 - Manual Operation

Heavy Duty Tee Steel Frame with flush hardwood deck. Standard platform and wheel sizes. Special racks and superstructures available. Capacities from 2500 to 4000 lbs. Write for specification sheet.



JAKES FOUNDRY COMPANY

Established 1891

2800 Charlotte Avenue

Nashville 9, Tennessee

ELECTROLIFT

...for long-term unfailing performance

The ElectroLift worm-drive hoists—in capacities from 1/4 to 10 tons... compact design requiring minimum headroom... superior braking power... simplicity of operation—are noted for their productive and dependable long life. Consult your local ElectroLift representative, or write for a complete catalog.



204 Sargeant Avenue
Circle 138 on Reader Service Card for more information
128

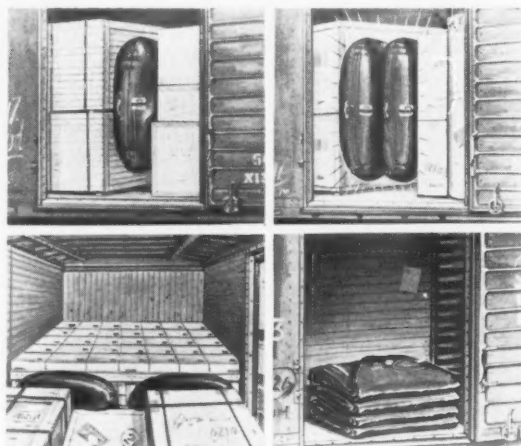
Clifton, N. J.

5844

NEW EQUIPMENT SECTION

Pneumatic Cushions for Dunnage

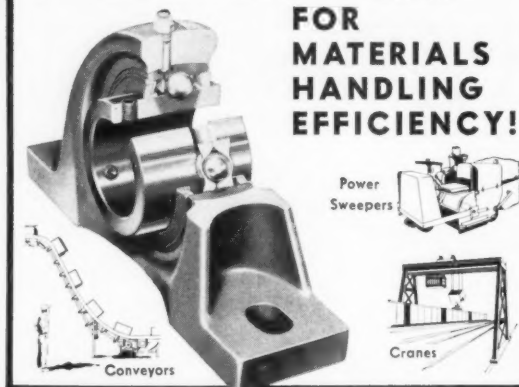
A line of inflatable cushions called Brace-Fast has been introduced by New York Rubber Corp., for use as dunnage for cargo protection. The bags are inflated with three to five pounds of air pressure, and



expand to fill the voids in loaded vehicles. They eliminate conventional shoring and bracing, and prevent impact damage to shipments in transit. Loading is

SEALMASTER BALL BEARING UNITS

**FOR
MATERIALS
HANDLING
EFFICIENCY!**



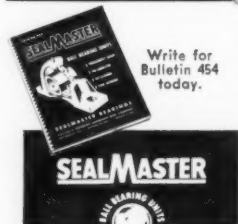
Conveyors

Power
Sweepers



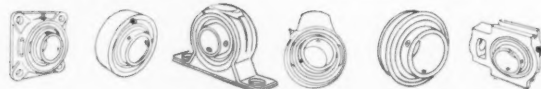
Cranes

SEALMASTER'S exclusive combination of features assuring smooth top flight bearing performance are much in demand throughout the materials handling field. You'll want full information on these SEALMASTER features and their benefits for the equipment you manufacture or operate.



Write for
Bulletin 454
today.

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
36 RIDGEWAY AVENUE
AURORA, ILLINOIS



Circle 139 on Reader Service Card

FLOW

many times faster, and more cargo can be loaded into the vehicle than with conventional methods. Each empty cushion weighs about 33 pounds. This method of shipping has been approved by the U.S. Quartermaster Corps.

Circle 200 on Reader Service Card

Cart with 3" Deep Trays



An improved type of Service Cart, developed by Lyon Metal Products, Inc., can be used as an assembly line feeder and in stockrooms, shipping and receiving rooms. It is 36" long x 24" wide x 32" high. Casters are 5" in diameter for easy rolling. Front casters are set back from the leading edge of the

lower tray to protect them from damage. Pan-type trays are 3" deep. Finish is green baked-on enamel.

Circle 196 on Reader Service Card

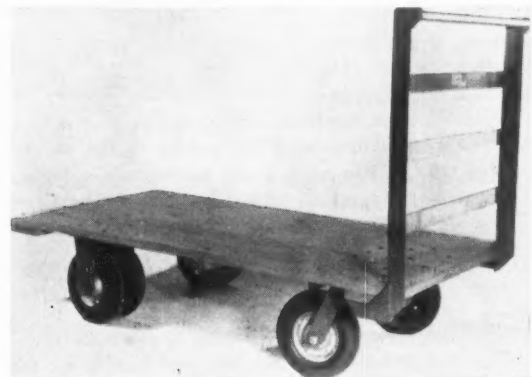
Approved Packaging With Foam

Dayton Rubber Co. offers electronic equipment manufacturers all the equipment, supplies and service for U. S. Navy approved packaging with Urethane foam. The Navy authorization permits electronic equipment producers to use Dayton Rubber's Poly-Koolfoam materials in a variety of ways, including foaming-in-place, pre-foaming around models or by molding in forms.

Circle 197 on Reader Service Card

Lightweight Platform Truck

The "Flitewate" is a lightweight platform truck with a capacity range from 500 to 1,500 pounds. It is manufactured by the M-H Equipment Company, Inc., in wooden deck sizes from 24" x 42" to 30" x 60" (al-



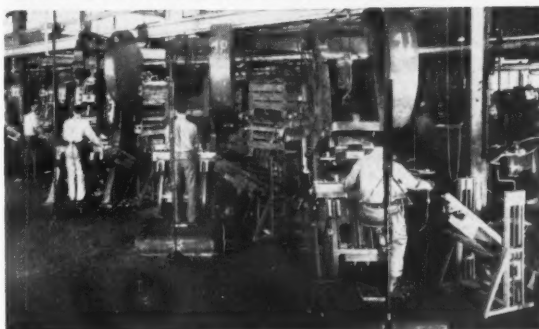
though any size can be obtained). The "Flitewate" is available with either single or double-end racks of heavy angle iron.

Circle 198 on Reader Service Card

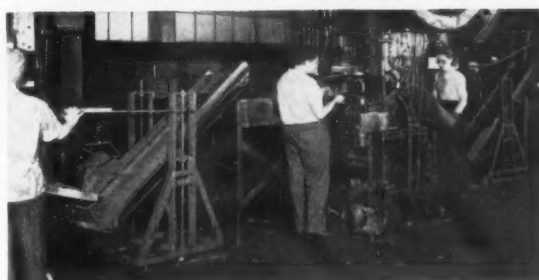
LITTLE HUSTLER CONVEYORS



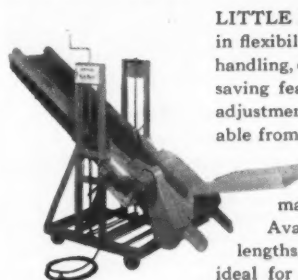
GIVE MAXIMUM FLEXIBILITY



FOR MANY TYPES OF



MATERIALS HANDLING JOBS



LITTLE HUSTLER conveyors' built-in flexibility eliminates costly manual handling, cuts production costs. Money-saving features include up and down adjustment . . . conveyor pitch adjustable from horizontal to 45° angles . . . rolls easily from job to job . . . requires minimum maintenance.

Available in various widths and lengths, the LITTLE HUSTLER is ideal for handling a wide variety of small and medium size parts. Write for Bulletin MF-2-413.

MAY-FRAN
ENGINEERING, INC.

1611 Clarkstone Road, Cleveland 12, Ohio



Circle 68 on Reader Service Card for more information

Circle 70 on Reader Service Card for more information

YOUR BEST MOVE IS TO MOVE WITH **MERRILL** MATERIAL HANDLING DEVICES



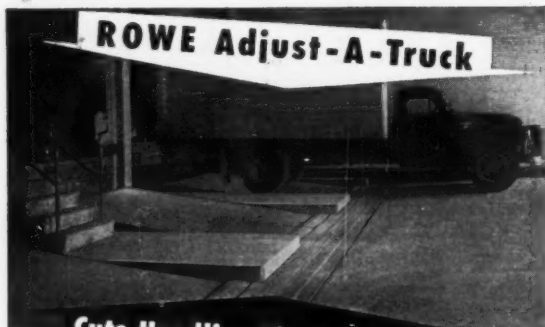
For Interesting Information write

MERRILL BROTHERS

56-74 ARNOLD AVE., MASPETH, N. Y.

3-R-5

Move Greater Pay Loads... Faster, Safer With Money Saving



Cuts Handling Time Up To 67%

...Saves Man Hours And Dock Space

■ Here's the low cost answer to positioning any highway carrier to proper dock height when it is impossible to use dock leveling ramps because of construction or space limitation. This 40,000 lb.-capacity hydraulic truck leveling device has 24" up-down travel and features: Low Initial, Installation and Operating Cost • Short Amortization Period • Rugged Construction for Long-Life Service • Minimum Maintenance • Exceptional Ease of Operation.

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new folder—It's
free of course

ROWE METHODS, INC.

2534-C DETROIT AVE.

CLEVELAND 13, OHIO

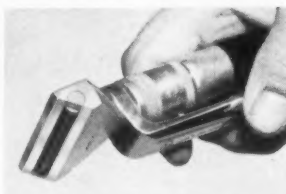
Circle 153 on Reader Service Card for more information

130

NEW EQUIPMENT SECTION

Glue Gun Is Non-Clogging

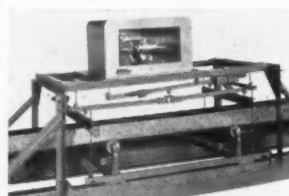
A complete selection of roller-type glue guns is now available from John P. Fox Co., Inc. The guns are designed for applying a ribbon of glue to any flat surface. They are constructed of stainless steel, and are of a non-clogging design. According to the manufacturer they are ideal for carton sealing, paper converting and woodworking applications. They are available in widths from 1/4-inch to 4 1/2 inches.



Circle 201 on Reader Service Card

Conveyor Scale Has Low Maintenance

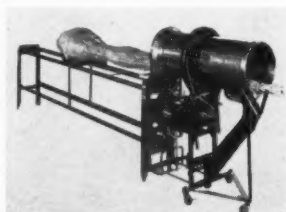
A redesigned line of belt conveyor scales is available from ABC's Scale Division, McDowell Co., for weighing, controlling and totalizing free-flowing bulk materials. The belt scales are designed to minimize and simplify maintenance and are built to an accuracy of 1/2 to 1 percent. Units are available for any belt width. They are built from standard components, to any capacity needed. All components are redesigned for long life with clean, trouble-free accuracy.



Circle 202 on Reader Service Card

Secure Wrap for Narrow Bundles

Specially designed for tying long bundles, B. H. Bunn Company's Ring Tying Machine can tie long, narrow bundles quickly and securely. It can handle bundles up to 11 3/4 inches in diameter, and there is no limit on their length. A touch of a foot pedal wraps twine around the bundle to the proper tension, ties a slip-proof knot, and cuts the twine. Ties can be made at any desired intervals. The Ring Tying Machine is powered by a 110 volt AC motor.



Circle 203 on Reader Service Card

Engine Line Expanded

The Caterpillar D353 Engine, well-known as the power unit in the Caterpillar D9 tractor, is now available in industrial engine, marine engine, and electric set arrangements. As specified by Caterpillar Tractor Co., the D353 is a 6-cylinder, 4-cycle engine with a

FLOW

6-1/4" bore and 8" stroke. It is rated at 390 horsepower at 1300 rpm (maximum output). The rated output of the D353 Electric Set is 200 kw. One important feature of this engine is the Caterpillar fuel system, which is designed to operate on a wide range of fuels without fouling. A full line of matching attachments is available for the D353: air, electric, or gasline starting systems; clutches; bases; controls and governors; cooling systems and mufflers.

Circle 204 on Reader Service Card

Belt Buckle Has Ratchet for Strength



The General Logistics Division, Aeroquip Corporation, manufactures 5,000 pound capacity buckle for heavy web belting used in cargo tie-down. The device is based on a ratchet-type take-up mechanism for tensioning belting to any load up to capacity. Designed with a quick-release

feature, the buckle may be used with a short length of strap on a cargo net; with longer lengths between anchor joints in trucks, cargo aircraft, industrial material handling equipment, or in ship cargo holds.

Circle 205 on Reader Service Card



Too bad, indeed. *Good* for you, though, that Roebing Slings do exist to make *your* materials-handling job simpler, safer, swifter.

Whatever the type—standard or special—you'll find that Roebing Slings embody advanced construction features that certify safe, steady service and stability under load.


Full information on slings and fittings is given in the Roebing Sling book. Ask for your copy: Wire Rope Division, John A. Roebing's Sons Corporation, Trenton 2, New Jersey.

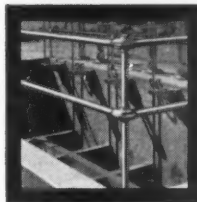
ROEBLING
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Subsidiary of The Colorado Fuel and Iron Corporation

Circle 82 on Reader Service Card for more information
FEBRUARY, 1958

Circle 137 on Reader Service Card for more information

Man!
This is a
cinch
with
NU-RAIL
SLIP-ON FITTINGS





- Stair Rails
- Machine Guards
- Safety Railings
- Scaffolding
- Portable Guards

WRITE TODAY!

No Threading — No Welding

Any man in your shop or maintenance department can build sturdy safety railings with NU-RAIL slip-on fittings and new or used pipe in standard I.P.S. pipe sizes. A hex key and hacksaw are all he needs, because NU-RAIL fittings *slip* on the pipe, and the unique offset design reduces cutting to a minimum. Made of high-tensile aluminum alloy . . . no painting or plating . . . use for temporary railings, too. 100% pipe salvage.

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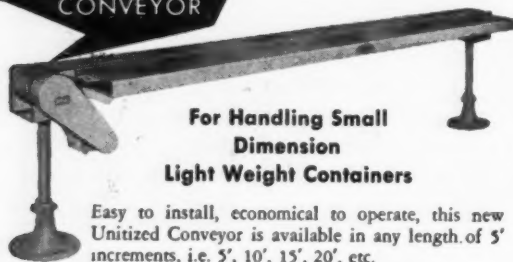
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Circle 48 on Reader Service Card for more information

NEW! NARROW BELT UNITIZED CONVEYOR

BELT WIDTHS
OF 1" TO 6"



**For Handling Small
Dimension
Light Weight Containers**

Easy to install, economical to operate, this new Unitized Conveyor is available in any length of 5' increments, i.e. 5', 10', 15', 20', etc.

CONSTRUCTED OF STANDARD PARTS

making it easy to lengthen the conveyor if increased production makes this necessary. Obsolescence of equipment is eliminated. Ideally suited for the pharmaceutical, cosmetic, aerosol packaging, drug and chemical, plastics, food products and baking industries.

FREE!

MAIL THIS COUPON FOR FULL DETAILS

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North
Long Island City 1, N. Y.

Dept. F-2

Please send particulars on the Unitized Narrow Belt Conveyors.

COMPANY.....

BY.....

ADDRESS.....

CITY..... STATE.....

Visit our exhibit Booth A, PMM Show.

NEW EQUIPMENT SECTION

Floor Need Patching?

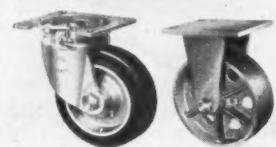
Chemi-Patch is the name of a floor patching material made by The Garland Company. It comes packaged in an all-in-one unit in a 2½ gallon container which holds the aggregate in a plastic bag and three cans (catalyst, binder and smoothing agent). Just mix the binder and catalyst in the container, add the aggregate, and the patching material is ready to apply.



Circle 250 on Reader Service Card

Swivel and Rigid Caster Team

Companion rigid and swivel casters capable of supporting loads up to 1500 pounds per caster have been developed by Faultless Caster Corporation.



The H900 swivel plate caster and the H9700, its rigid companion, feature heavy gauge steel construction for use on heavy duty trucks and



17 FORK AND PLATFORM MODELS — TO 20,000 LBS.

Through 30 years of the toughest day-in day-out work (the concrete block industry), Erickson has truly proven itself to be "The Workhorse of Lift Trucks." Ruggedly built for long life and low operating cost. Perfect balance and big pneumatic tires give the Erickson wonderful traction. 4 speeds both forward and reverse.

The Erickson is "tailor-made" for your needs. You can order any fork lift or fork style desired; beds on platform trucks as you specify. Many attachments available.

W SERIES 2,000-4,000 lbs.	FK SERIES 4,000-7,500 lbs.	FR SERIES 10,000-20,000 lbs.	KART-ALL SERIES 4,000-10,000 lbs.	PLATFORM SERIES 5,000-15,000 lbs.

Write for Erickson literature and prices.

Export Dept. Neuert, Wilton & Associates, Inc., 32 W. Randolph St. Chicago 1, Ill.

Manufactured by **ERICKSON POWER LIFT TRUCKS, INC.**
215 ST. ANTHONY BLVD. N. E. • MINNEAPOLIS 18, MINNESOTA



W SERIES — Compact, powerful, reliable! Four big pneumatic tires for fast, sure travel indoors and out. Rated capacities 2,000—3,000—4,000 lbs.—standard 108" lift—10" center underclearance.

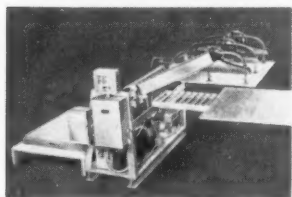
Erickson **KART-ALLS** will pull train of trailers plus a load of freight. With ar-tic-u-lat-ed pivot it's a delight to steer and handle for airports, terminals, warehouses, etc. Custom built to your requirements.

Circle No. 140 on Reader Service Card for more information

other plant equipment. The H900 has two complete rows of large diameter ball bearings rolling in separate, hardened lubricated raceways; adjustable king bolt; and formed steel grease retaining cup under lower bearings.

Circle 251 on Reader Service Card

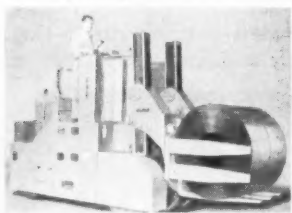
Automatic Sheet Feeding



A sheet feeder has been designed by the de Florez Co., Inc., to handle materials such as cardboard, plastics, metal, asbestos board, etc. Sheets may be flat or formed, and may be rectangular or irregularly shaped. Primary use of the unit is to deliver sheets from piles to processing equipment (slitters, punch presses, forming machines), but it may also be used to remove sheets from conveyors or machine tables for stacking. The machine feeds automatically upon receipt of signals from an associate machine, a timing device, a sheet sensing mechanism, or from the feeder itself upon discharging a sheet.

Circle 252 on Reader Service Card

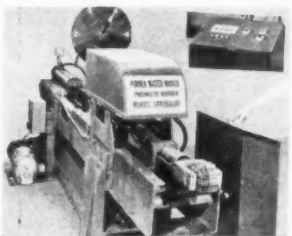
Heavyweight Coil Handler



A 20,000-pound capacity lift truck with a rotating head has been designed to handle and position heavy coils. The truck, a product of the Elwell-Parker Electric Company, picks up coils which are stored in a horizontal position; it upends them during travel and deposits them in a vertical position so the coils may be conveyed through the annealing furnace. After annealing, the truck is used to change the coils' position before replacing them in storage.

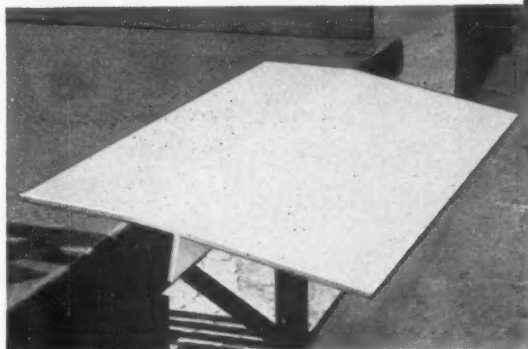
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Marking by Remote Control



You can stamp any marking on your product by pushing buttons at a remote location with Pannier Corp.'s Remote Control Pneumatic Marker. Simply by pushing buttons, the operator sets up the message to be marked, adjusts for product size and activates the marking procedure. He does not have to be unnecessarily close to products that are dangerous or inaccessible. Each changeable type character has a control button on the remote control panel. Once the operator "types" a message, it remains constant until

LANGSENKAMP'S ORIGINAL ALUMINUM DOCK PLATE



only
\$49⁰⁰
(24" x 48" size)

Here's the ready-made answer to a dock loader's prayer. For all-around practicality, it's the finest dock plate ever built... and the low price makes it an unbeatable bargain. The following features explain why it belongs on your loading dock:

- **STRONG**—Made of $\frac{3}{8}$ " aluminum; has 12,000 lbs. load strength.
- **3 TIMES LIGHTER THAN STEEL**—24" x 48" size, weighs a mere 58 lbs., one man can lift it easily.
- **BUILT-IN STOP ANGLES**—Keep plate anchored where you lay it.
- **SELF-ADJUSTING**—Shaped to accommodate height differences between loading dock and truck bed.
- **MANEUVERABLE**—Easy to handle in loading operations where space is restricted.
- **BEVELED**—Permits direct hand-truck pickup without first lifting plate by hand.
- **EIGHT DIFFERENT STYLES IN 15 DIFFERENT SIZES**—Ramp, railroad dock, light duty, heavy duty, hinged models... special types.
- **OPTIONAL**: Guard rails of $1\frac{1}{2}$ " x $1\frac{1}{4}$ ", painted, countersunk and bolted in place; also, skip welding for non-skid surfaces.

DISTRIBUTORSHIPS AVAILABLE

CUSTOM FABRICATION
to your specifications on
**PALLETS • HAND TRUCKS
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WRITE OR WIRE:

F. H. LANGSENKAMP CO.

227 EAST SOUTH STREET

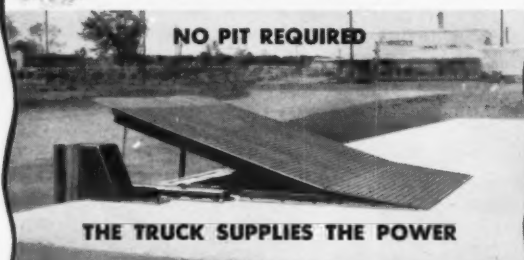
INDIANAPOLIS, INDIANA

Circle 55 on Reader Service Card for more information

Circle 54 on Reader Service Card for more information

NOW! SOLVE THAT LOW DOCK PROBLEM

Economically
NEW HI-LO AUTOMATIC DOCKBOARD



THE TRUCK SUPPLIES THE POWER

Model 1208; 8' long by 6' wide. Model 1210; 10' long by 6' wide.

SAVES TIME
Backing truck automatically adjusts long, wide ramp surface . . . speeds loading. Does away with labor-wasting placement and storage of loose plates.

SAVES EXPENSE
The HI-LO is simply lagged to top of present dock. Can't be lost, stolen, or damaged. Simple counterbalance system. No hydraulics, motors, or controls.

IMPROVES SAFETY
No more loose plate hazards. No lifting or straining. The HI-LO is a permanent part of the dock . . . cannot slip out of position.



WRITE FOR COMPLETE LITERATURE

KELLEY COMPANY, INC.

2117-A W. Mill Road
Milwaukee 9, Wisconsin

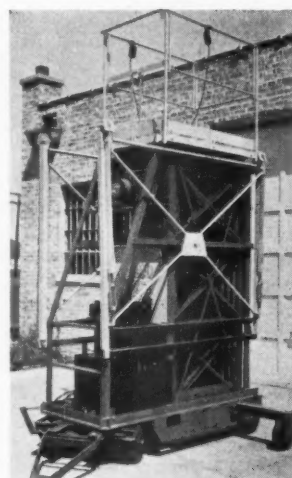
NEW EQUIPMENT SECTION

he resets it. The unit can be operated by punched card or punched tape, for completely automatic marking of any number of messages.

Circle 254 on Reader Service Card

Need a Lift?

A 1,000 pound capacity unit has been added to the Allied Manufacturing and Sales Company line of telescopic lifts for "off-the-ground" construction and maintenance jobs. Known as Grand "Sky-Ride", J2531, this lift can be extended to 40 feet or stopped and locked at any intermediate height. Completely retracted height is 9'2". The machine can be rolled from job to job or transported by fork lift truck. Safety features include a control valve at the



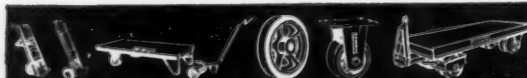
THOMAS JAK TUNG SYSTEM

"JOB-SUITED"
to TRUCK,
STORE
and SPOT
your loads
WITHOUT
REHANDLING



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THOMAS TRUCK & CASTER CO.
810 Mississippi River • Keokuk, Iowa



THOMAS MAKES ALL KINDS OF TRUCKS, SKIDS, CASTERS AND WHEELS

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22 MODELS COST-CUTTER CONVEYORS

Meet "FREAK" REQUIREMENTS
without extra engineering cost

**3 of 22
DESIGNS**

TYPE 20

Four Wheel Mounted,
Double Nose-Over.

TYPE 22

Double
Nose-Over and Adjustable
Power Feeder.

TYPE 19

Caster Mounted, Power
Feeder. Double
Nose-Over. Adjustable
At Each End.

- Aluminum or Steel
- Electric or Gasoline
- Belt Widths 8" to 24"
- Lengths 4' to 40'

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Test Run in our plant to assure Proper Performance.
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NEW LONDON ENGINEERING CO.
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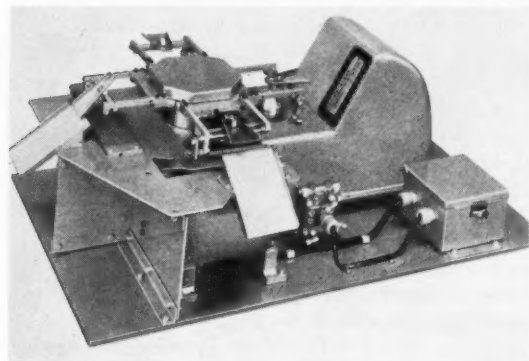
Circle 75 on Reader Service Card
FLOW

hydraulic fluid return outlet, factory set to control descent of the platform in case of leakage; safety toe-board and steel tubing rail on the platform; four heavy-duty bronze bearing roller chains that support each section of the telescopic lift.

Circle 255 on Reader Service Card

For Automatic Precision Checkweighing:

According to the Exact Weight Scale Co., its line of Selectrol automatic checkweighing machines is capable of weight accuracies in the range one part in



5,000 to one part in 20,000. These machines, designed for checkweighing production parts and packages, are available in capacities from one gram up to 100

TAKES JUST 60 SECONDS TO TEST MOVING CHAIN CONVEYOR for OVERLOAD



WITH DILLON Dynamometer

Now you can take frequent, accurate checks on conveyor chains and put a stop to costly breakdowns! No need to halt, break or loosen conveyors to attach this DILLON DYNAMOMETER. Utilizing a quickly positioned tensioning assembly at any check point, you install the DILLON DYNAMOMETER in 45 to 60 seconds while conveyor is moving. Remove it just as quickly and easily!

This is just ONE of more than 100 different ways in which the versatile DILLON DYNAMOMETER can serve in your plant. Capacities from as low as 500 lbs. up to as high as 100,000 lbs. Why not write today for profusely illustrated catalog in full color?



W. C. DILLON and CO., Inc.

14568Q Keswick St., Van Nuys 8, Calif. (Suburb of Los Angeles)
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FEBRUARY, 1958

Circle 95 on Reader Service Card for more information

WIRE TAINER

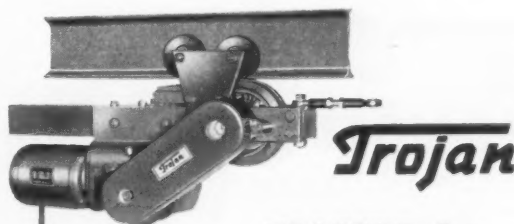
the sensible, convenient way to handle Stock
STACKING FOLDING



OPEN BASE 1 & 2 TON CAPACITY

Write for circular and details

SPRINGPORT STEEL PRODUCTS CO.
SPRINGPORT, MICHIGAN



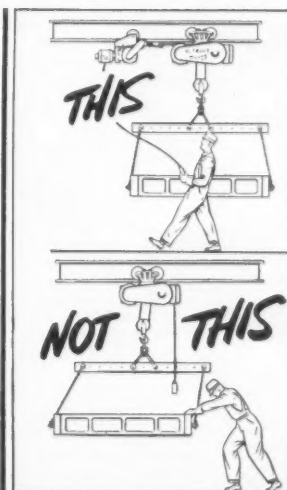
TRACTOR for POWER TRAVEL

Proven Money Saver
In Hundreds of Instances. Ask for Trojan
Tractor Bulletin 833

Make your hand pushed hoists and cranes power traveled. Eliminate slow pulling and pushing drudgery. Speed up handling, save time, increase production, reduce costs. Simply attach a Trojan Tractor; inexpensive, quick delivery. Order one today.

DETROIT HOIST & MACHINE CO.

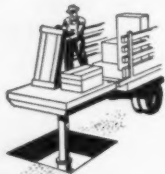
Designers and Manufacturers
of Hoists and Cranes since 1905
8212 Morrow St.,
Detroit 11, Mich.



Circle 24 on Reader Service Card for more information

Lift it the low-cost way

WITH DEPENDABLE HYDRAULIC POWER

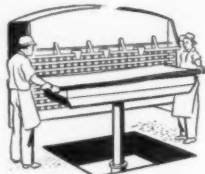


Load trucks from floor level
... no dock needed



Move traffic from one floor
level to another

Rotary Levelator Lifts, using dependable, economical oil-hydraulic power, have countless applications in modern industry. Capacities to 100,000 lbs. Standard models and special lifts engineered to your specifications. Write for catalog.



Feed machines, perform other
industrial lifting jobs

Rotary Levelator Lifts
ROTARY LIFT COMPANY

Division of the Dover Corporation

1150 Kentucky, Memphis 2, Tenn. • Chatham, Ont.

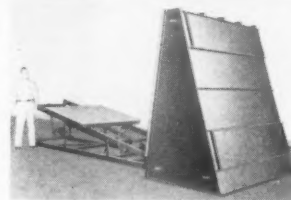
NEW EQUIPMENT SECTION

pounds. Automatic transfer mechanisms place the parts on the weighing element and remove them; accuracy is not affected since the transfer mechanisms are not attached to the scale lever system. Model No. 144 (illustrated) employs a rotary transfer mechanism with one loading station, one weighing station, and 2 discharge stations. Other designs use conveyor belts and air powered deflecting gates to shunt the products into weight classification channels.

Circle 256 on Reader Service Card

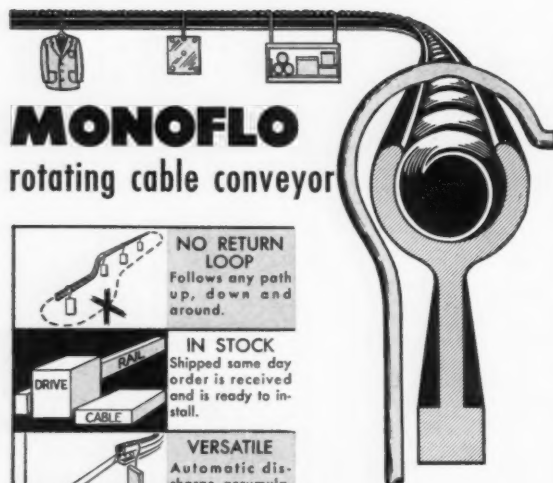
Package Tester Won't Shake Plant

A 1000-pound package tester that will not shake floors and machinery has been introduced by L.A.B. Corp. This conburt-type tester has a ballast barrier that absorbs a large portion



of impact shocks, yet does not interfere with testing efficiency. After the machine is installed the barrier is filled with 10,000 pounds of sand or other loose material. The machine can be easily relocated, by removing the sand.

Circle 257 on Reader Service Card

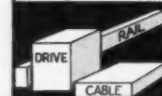


MONOFLO

rotating cable conveyor



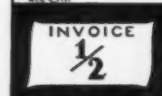
NO RETURN LOOP
Follows any path
up, down and
around.



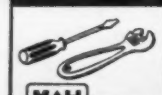
IN STOCK
Shipped same day
order is received
and is ready to in-
stall.



VERSATILE
Automatic dis-
charge, accumula-
tion, or transfer to
another conveyor.



LOW COST
Far under price of
any other power
conveyor.



INSTALLED
By any mechanic
with simple tools.

Full size section thru
MONOFLO CONVEYOR

Hundreds of MONOFLOS working in Electronics, Metal Parts, Autos, Atomic, Missiles, Printed Circuits, Garments, Laundries, Glass, Food, Rubber, Plastics, Instruments.

They deliver parts, return empty jigs, accumulate parts and carry parts thru heating, cooling, painting, baking, etching, drying.



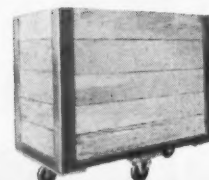
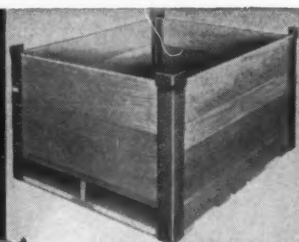
M-H STANDARD CORPORATION

515 Communipaw Ave., Jersey City 4, N. J.

Circle 61 on Reader Service Card for more information
136

BOXES

SKID
PALLET
TRUCK



**Stack'em
Dump'em • Roll'em**

IRONBOUND

30 Hoffman Place • Hillside, N. J.



Pry Bar



Circle 168 on Reader Service Card for more information
FLOW

HOW TO CUT COSTS IN MULTI-ITEM DISTRIBUTION CENTERS

All too often, warehouses, stock rooms and other centers of distribution are regarded as the "step-children" of industry... bypassed by management and hamstrung by obsolete or inefficient handling techniques.

Today's trend to diversified lines is boosting distribution costs to an all-time high. To cut costs, production and marketing executives are re-examining their handling systems. They are making sure they are reaping the full profit potential of this diversification. Such studies may be performed by internal management teams, some of whom, unfortunately, tend to splurge on material handling equipment that pays off slowly — if it does the job at all.

Sound policy dictates first calling in a qualified methods engineer who specializes in multi-unit handling. His impartial analysis points to the most practical solution and the most sensible investment. His scientific procedure cuts costs and builds customer good-will by simplifying the handling of products despite their wide variety. In this way, competent consultants pay their way by actual savings in a year or less.

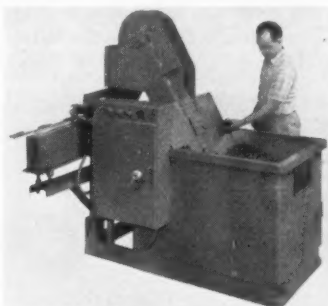
Perhaps you are considering a reappraisal of your handling operations. Bertrand Frank Associates, Inc., is well equipped to analyze the control, movement and storage of your materials or finished products

**BERTRAND FRANK
ASSOCIATES**
475 FIFTH AVENUE
NEW YORK 17, NEW YORK
MUrray Hill 5-4460
Management Consultants

Circle No. 35 on Reader Service Card
FEBRUARY, 1958

Medium-Large Storage Feeder

Campbell Machines Company has added 5, 10, and 20 cu. ft. storage capacity units to its line



of orienting storage feeders. These models will store, elevate, orient, and feed parts having overall dimensions ranging from $\frac{1}{8}$ " x $\frac{1}{8}$ " x $\frac{1}{4}$ " to 3" x 6" x 10". Irregular stamped, machined and cast parts are readily oriented and fed. A single feeder can be tooled to feed a family of parts. Production rates range up to 300 pieces per minute.

Circle 258 on Reader Service Card

Kits Keep Console Up-To-Date

A remote control console has been developed by Motorola, Inc., to extend the control function of



any remotely located 2-way radio base station to the dispatcher's office over 2 or 4 wire lines. The unit features an all-metal housing with provisions for 13 controls on the front panel. These 13 positions may be utilized for one or more "kits" available to meet the needs of the radio dispatcher. As requirements change, new kits may be added to keep system operation up to date. The basic console has a full-size communication type speaker, speaker volume control, and transmit indicator light.

Circle 259 on Reader Service Card



PHOENIX



**SOLID RUBBER
TIRES WITH
E-Z ROLLING
TREAD**

*Handle
Better!*



The perfect type of tire to fit practically all industrial needs is the Phoenix cured-on solid rubber tire with the exclusive E-Z Rolling Tread Compound. Or if you need a special tread, such as hard rubber, static conducting or oil resisting, Phoenix has the answer. Be sure to check Phoenix—a dependable source for cured-on solid rubber industrial tires for 25 years!

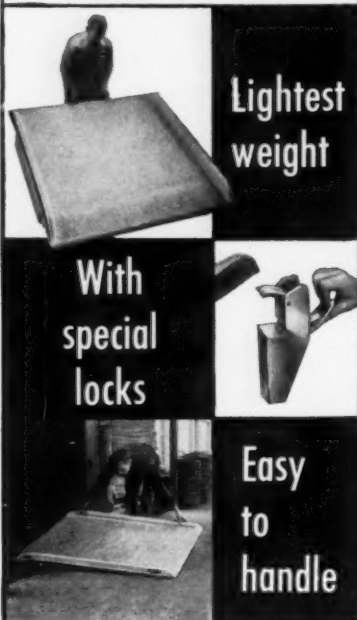


Write for
folder giving
load-bearing
data for 53
standard
sizes.

RUBBER PRODUCTS DIVISION
PHOENIX
MANUFACTURING COMPANY
Founded 1882
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Circle 79 on Reader Service Card

Magcoa magnesium Dockboards



Lightest
weight

With
special
locks

Easy
to
handle

safest to use!

- ✓ Safety from strains—the lightest metal available
- ✓ Safety hand holds—no crushed fingers
- ✓ Safety from all board slippage with new locking device
- ✓ Safety curbs to prevent accidents
- ✓ Safety tread plate insures traction
- ✓ Safety engineered to your requirements

For full details
use the coupon below.

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OF AMERICA Materials Handling Div.

magcoa East Chicago 1, Indiana
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- ☐ Please send special Dockboard File and news on new safety lock

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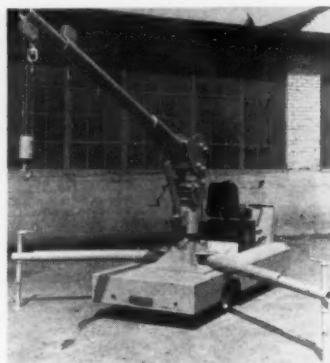
City-Zone-State _____

Copyright, 1958, Magnesium Company of America
Circle No. 65 on Reader Service Card
138

NEW EQUIPMENT SECTION

Powerful Midget

An industrial crane, the Mighty Midget Jr. (Model 18) is the latest product of P. A. Radocy & Sons,

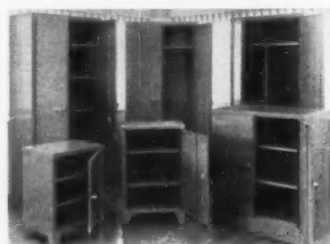


Inc. The machine has a manually-operated 18-foot boom with a lifting capacity of 500 to 2000 pounds. The boom is mounted on a Kalamazoo Model 2500L Speed Truck. Crane rotates 360 degrees on a worm gear; it has full safety factors, including the ratchet and pawl control, which will hold the load at any point with safety.

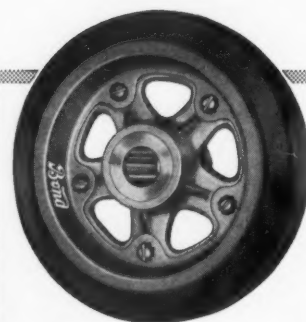
Circle 260 on Reader Service Card

Steel Cabinet Line Available

Penco Metal Products Division, Alan Wood Steel Company, has made available a line of steel cab-



inets in the following classifications: storage, wardrobe, combination storage and wardrobe, desk-height efficiency, counter-height utility, and tool-room. This equipment is designed for use in offices, factories, and warehouses. Features of this cabinet line include: heavy-gauge steel construction; 3-point security latching; oven-baked enamel finish, electrostatically sprayed over a zinc-iron-



Only the new

Bond
DEMOUNTABLE

RUBBER TIRED WHEELS

have keyed flanged sections
for fast, easy assembly!



Don't discard whole wheels when tires are worn! With Bond Demountable Rubber Tired Wheels you replace *just the tire*. Exclusive keyed flange sections eliminate shearing strain on the locking bolts and simplify assembly. Bond Demountables are sturdy, comparable to vulcanized-on or molded-on wheels. Tough rubber tires are permanently mounted to a hard base. And it's a high efficiency, easy rolling tire that will not stretch or creep.

Insist on the new Bond Demountable Rubber Tired Wheels. They're available in 6" x 2", 8" x 2" and 8" x 2½" sizes with soft, easy rolling G-1, hard G-2 and oil resisting neoprene G-3 compounds.

Contact the Bond distributor in your city or write, wire or phone for details.

Bond
FOUNDRY & MACHINE
COMPANY

MANHEIM, PENNSYLVANIA

Circle 151 on Reader Service Card
FLOW

phosphate undercoat; built-in grooved key locks; flush hinges; adjustable shelves.

Circle 261 on Reader Service Card

Custom Top for Lift Trucks

A canvas cab cover for lift trucks is manufactured by the D. & M. Truck Top Co., which also

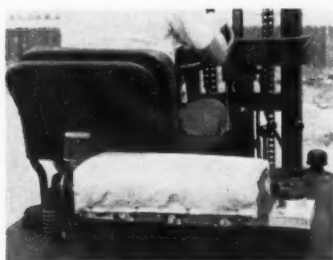


supplies framework for the cover if the truck is not equipped with a factory overhead guard. According to the manufacturer, this cover provides protection in all kinds of weather, keeps the driver dry and comfortable.

Circle 262 on Reader Service Card

No Hot Drivers

"Kamklad," a fire-resistant, heat-reflecting aluminized asbestos cloth made by Keasbey & Matti-



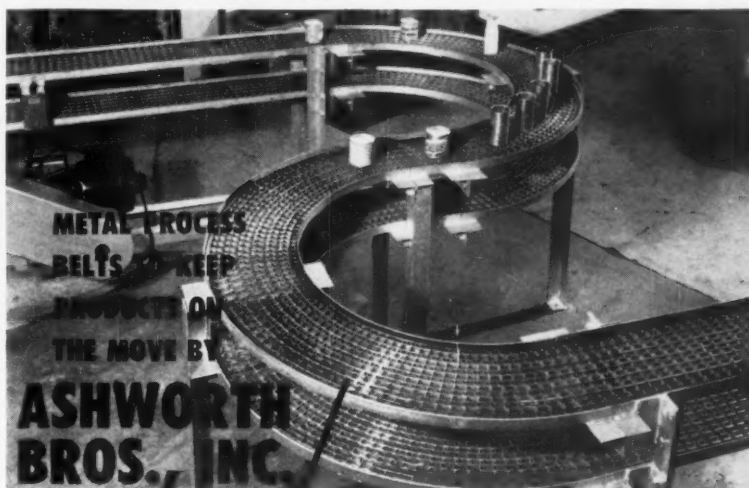
son Company, has many industrial applications, according to information from the manufacturer. The illustration shows it as a heat-resistant cover for an Oxy-Muffler (a catalytic exhaust purifier manufactured by Oxy-Catalyst, Inc.) installed on the counterweight of a fork-lift truck. The "Kamklad" cover protects the driver from heat generated by the purifier unit.

Circle 263 on Reader Service Card

Circle No. 6 on Reader Service Card for more information

OMNI-LEX[®] BELT by ASHWORTH

Let your production move around corners on the new, low cost Omniflex belt. Short turning radius • light weight • easily installed • low maintenance factor



WINCHESTER, VIRGINIA

SALES ENGINEERS:

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LANSING COMPANY
"NIFTY-TOTER"

MATERIALS HANDLING EQUIPMENT
FOR EVERY NEED



83

NEW TOTE PAN TRUCK

- SAVES TIME
- KEEPS STOCK HANDY
- PROVIDES EASY HANDLING

A new labor-saving hand truck to handle tote pans, tools, jigs, dies and other fixtures. Holds material at working level. Angle iron frame supports three heavy gauge steel trays. Rolls freely on four solid rubber wheels. Front wheels swivel for maneuverability. Capacity: 450 lbs. Height: 42 inches.

Special design Tote Trucks or Material Handling Equipment made to your specifications — write for information.

SINCE 1881

LANSING CO.
LANCO MATERIAL HANDLING EQUIPMENT
LANSING, MICHIGAN

Circle No. 56 on Reader Service Card for more information



**your
BEST
move!**

ALBION *industrial...* CASTERS

Albion casters checkmate your materials handling problems. They are versatile, dependable, economical and available right now. Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are the practical answer.

Albion casters are available in every conceivable range of Industrial size, type, capacity and desired wheel type to suit your needs.

Make the best move...get all the facts on Albion Casters today. Write, wire or phone for the information you need. Albion is always at your service.

Do it now...

request your copy of the Albion Caster and Wheel catalog. Yours for the asking.

**ALBION
INDUSTRIES, INC.**

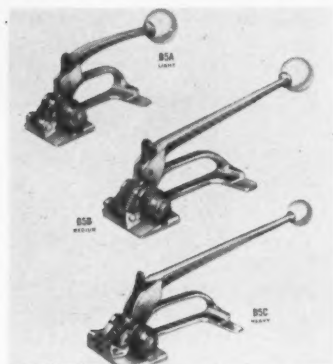
Distributors in Every Strategic City
MAIN PLANT:
ALBION, MICHIGAN

Circle No. 7 on Reader Service Card
140

NEW EQUIPMENT SECTION

For Light, Medium, Heavy Strapping

The B5 Stretcher is available in light, medium, or heavy duty models to fit the particular strapping



application. Manufactured by Acme Steel Company, the three models together can be used with every strap size from 1/4" to 3/4" x .035". This device is precision balanced so that strap can be applied from any direction with the tool in any position, states the manufacturer. A rotary gripping dog gives continuous take-up for effective use with compressible materials.

Circle 264 on Reader Service Card

For Level Landings

Rotary Lift Company Division of Dover Corporation has developed a two-way leveling mechanism for oil-hydraulic elevators.



This mechanism is the first to be included as an integral part of an oil-hydraulic control mechanism with unitized construction, says the manufacturer. Unitized construction represents a combi-

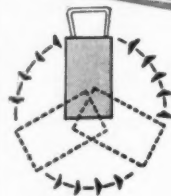
MET-L-ITE ALUMINUM TRUCKS



**PUSHING THE
HEAVIEST LOADS
— A SNAP!**



**LONGER
LIFE
WITH
MAXIMUM
SAFETY AT
LOWER COST!**



**FREE and EASY
WHEELING—turns on
its own axis.**

MET-L-ITE ALUMINUM TRUCKS are engineered with your requirements in mind—including one-piece formed deck for minimum weight and maximum strength.

MET-L-ITE manufactures a complete line of lightweight aluminum trucks:

- Hand Trucks
- Tow Line Trucks — Overhead and Floor Tow
- Shelf Trucks
- Specialists in Aluminum Material Handling Trucks

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MET-L-ITE PRODUCTS DIVISION
VOLTZ BROTHERS, Inc.
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EXCLUSIVE DEALERSHIPS IN SELECTED AREAS

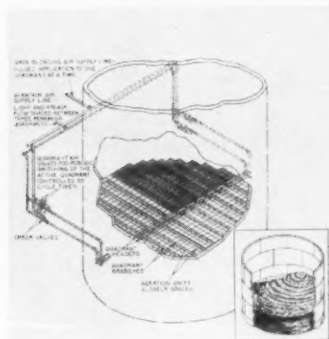
Circle No. 105 on Reader Service Card
FLOW

nation of oil valves operating within one housing to control the movements of an oil-hydraulic elevator. The two-way leveling feature causes an elevator traveling upward or downward to decelerate at a given distance before reaching a floor level.

Circle 265 on Reader Service Card

For Blending Pulverized Materials

Fuller Company, a subsidiary of General American Transportation Corporation, has designed the "Fuller Airmerge Quadrant

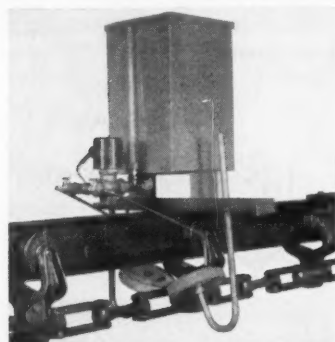


Blending"—an aeration system of blending dry bulk pulverized materials. The system can be used on any materials which are capable of being fluidized by compressed air (cement, fly ash, or other materials with similar characteristics). The manufacturer states that this process reduces deviations in unblended components down to plus/minus .2 percent.

Circle 266 on Reader Service Card

No Oil Drip

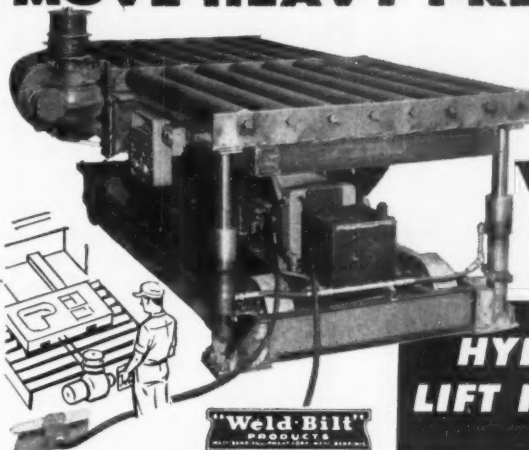
An automatic oiler for conveyor chain links and pins applies an



even film of oil by direct contact of oil-carrying felt rollers. Ac-

Circle No. 109 on Reader Service Card for more information

MOVE HEAVY PRESS DIES EASIER



WITH SPECIAL
Weld-Bilt
WINCH-EQUIPPED
ROLLER TOP

**HYDRAULIC
LIFT PLATFORM**

Those extra heavy dies move on and off your big presses with surprising speed and little effort—with this new Weld-Bilt Hydraulic Lift Platform. Just move the platform to the press, raise or lower it to proper level, secure the cable hook, push a button, and the motor driven winch pulls the die or other heavy unit over the free-running rollers—on or off your press.

Built to handle 20,000 lbs., this new

unit, 48" x 96" long, has two sets of conveyor rollers, with a special motor driven winch mounted on one end. Platform is raised or lowered by means of two-way foot pedal control operating hydraulic pump and motor. Steel wheels and swivel front casters, plus tow-bar, permit easy movement and positioning of the table. Similar Weld-Bilt units can be designed to various sizes and capacities to 30,000 lbs.

You, too, may have a lift-or-move problem in heavy equipment. Weld-Bilt engineers can offer a profitable solution. Write, we'll be glad to supply details.

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS

335 WATER STREET • WEST BEND, WISCONSIN

EASY DOES IT

FIELD

with

LOAD • O • MATIC

COMPLETELY AUTOMATIC LOADING PLATFORM



HERE ^{to} HERE in 20 seconds
and saves you money every second.

Completely sealed HYDRAULIC MECHANISM in standard, ready-to-install, fully automatic, self leveling units on loading docks or ground level.

FIELD

Write for "LOAD • O • MATIC" Bulletin

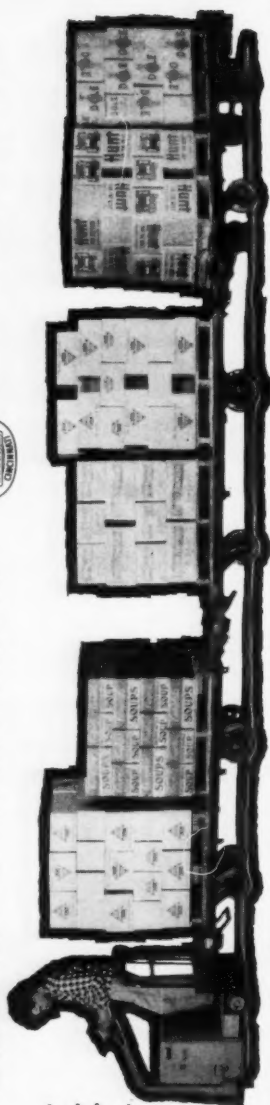
ENGINEERING PRODUCTS CO., Jamestown, N.Y.

SPECIALISTS IN HYDRAULIC LOADING LIFTS

Circle No. 34 on Reader Service Card for more information

HydroLelectric A GREAT NAME IN LIFT TRUCKS

STUEBING Designed • Engineered • Built



This powerful Hydroelectric Tractor hauls one or multiple units with speed, safety and ease of operation. Features the exclusive DYNA-DUAL POWER UNIT. Power enough to pull loads of 6000 lbs. or more at low cost.

Write for Bulletin KT

LIFT TRUCKS, INC.

2419 Spring Grove Avenue, Cincinnati 14, Ohio

Circle 57 on Reader Service Card

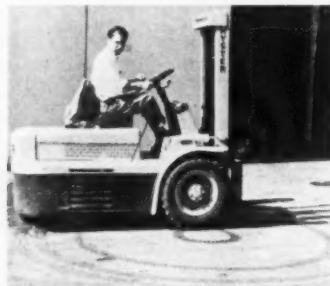
NEW EQUIPMENT SECTION

cording to the Olsen Manufacturing Company, this unit eliminates mist, spray, or drip. Rollers apply an oil film to each side of top of chain simultaneously. A solenoid valve automatically starts and stops oil flow as the conveyor starts and stops. Two needle valves directly control the oil flow to each side of chain after the solenoid valve is opened.

Circle 267 on Reader Service Card

Optional Power Steering

Hyster Company offers power steering as optional equipment for pneumatic-tired trucks in the 3,000, 4,000 and 5,000 pound ca-

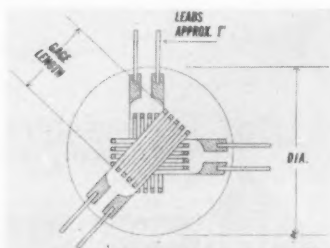


capacity range. The company states that fast and dependable steering action is assured with this system because of a flow divider in the hydraulic system that always directs fluid first to the power steering unit. Power installation can be made at the factory or by field installation.

Circle 268 on Reader Service Card

High Sensitivity Strain Gage

An SR-4 foil type rosette strain gage is produced by the Electronics and Instrumentation Division



of Baldwin-Lima-Hamilton Corporation. These rosettes have a

**precision
engineered
for long service**

DARNELL
CASTERS AND WHEELS



CHECK These Features

RUBBER TREADS . . . a wide choice of treads suited to all types of floors, including Darnelloprene oil, water and chemical-resistant treads, make Darnell Casters and Wheels highly adapted to rough usage.

RUST-PROOFED . . . by zinc plating, Darnell Casters give longer, care-free life wherever water, steam and corroding chemicals are freely used.

LUBRICATION . . . all swivel and wheel bearings are factory packed with a high quality grease that "stands up" under attack by heat and water. Zerk fittings are provided for quick grease-gun lubrication.

STRING GUARDS . . . Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

ASK FOR FREE MANUAL TO ASSIST YOU IN SELECTING THE TYPE BEST SUITED TO YOUR NEEDS . . .

*Sold by leading distributors
from coast to coast*

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YELLOW PAGES
under
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DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

Circle 21 on Reader Service Card

FLOW

sensitivity that is eight percent higher than any previously produced, claims the manufacturer. The gages are of bonded filament type construction. They need no lateral corrections except in the most precise testing problems, can withstand temperatures as high as 300 degrees F in continuous service.

Circle 269 on Reader Service Card

Multi-Size Pans

All-steel nesting pans designed to utilize existing shelving are pro-

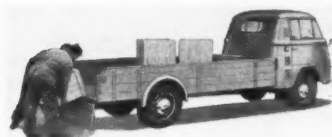


duced by the Randolph Industrial Equipment Company. The RAN/tote No. 802 is available in sizes that fit all standard shelving. The pans nest when empty, can be used on roller, belt, or overhead conveyor systems.

Circle 270 on Reader Service Card

Imported Pick-Up Truck

The Tempo Matador Low Load-Pick-Up is available from the Fadex Commercial Corporation. It



is claimed to be 10 inches lower to the ground than the average truck and to have a larger loading area. The truck has front-wheel drive and powered by the British 52 BHP Austin A-50 engine. Seats three.

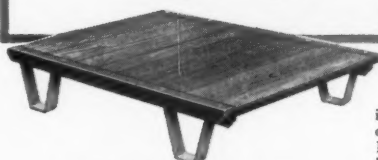
Circle 271 on Reader Service Card



Circle No. 163 on Reader Service Card for more information

NEW CATALOG

shows how to choose
the right **SKID** or
SKID BOX
for your job



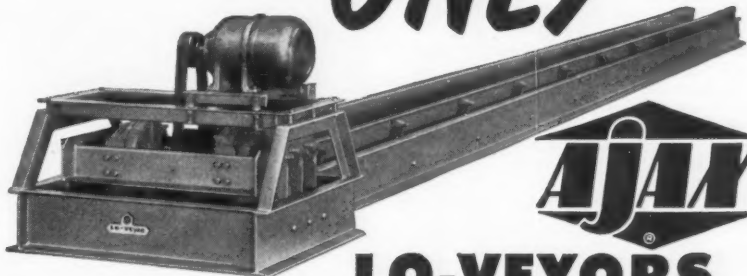
Lanham Skids are factory tested to assure capacity use, year after year.



When materials handling equipment is designed for a specific job, whether storing or transporting, it increases efficiency... **LOWERS COSTS.** Our new catalog shows how to order Lanham Skids and Skid Boxes designed to handle any type or shape of commodity. Write today for Catalog No. LS-58.

<p>Rollaway Jacks & Semi-Live Skids</p>	<h3>LANHAM</h3> <p>FOR LIFETIME</p> <p>THE LANHAM CO. 821 Mississippi River • Keokuk, Iowa</p>	<p>Sectional Bins</p>
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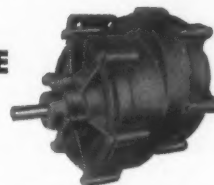
ONLY



LO-VEYORS

**GIVE YOU THE LOW COST PERFORMANCE
MADE POSSIBLE BY THE
AJAX RECIPROCATING DRIVE**

Ajax Lo-Veyor performance is built around its exclusive reciprocating drive. It is a self-contained unit housing two gear driven weights rotating in opposite directions, which impart reciprocating action in automatic balance. The drive mechanism runs on anti-friction bearings in an oil tight housing — which keeps lubrication in and abrasive dirt out. Lo-Veyors are available in open and closed pan or tubular types. Write for catalog.



Showing Ajax Reciprocating Drive Unit. Smooth operation permits installation without heavy anchorage to building.

AJAX FLEXIBLE COUPLING CO. INC.
WESTFIELD, N. Y.

Circle No. 3 on Reader Service Card for more information

STEEL WAREHOUSE "TAKES TO THE AIR"



Fig. 1 — TRAK-RAK fork lift at top of column, lifting bundle of steel rod. Unit serves 3 long aisles of racks.

TRAK-RAK SYSTEM INCREASES STORAGE SPACE, SAVES 22% CAPITAL BUILDING INVESTMENT

When A. C. Leslie & Co. Limited, needed more storage area in its busy Toronto steel warehouse, it decided to "reach for the ceiling" with a Chicago Tramrail TRAK-RAK System of vertical storage and handling. As a result, the company estimates it not only saved 22% of projected capital building costs, but increased the overall efficiency and speed of the Toronto operation. The company expects to gain further economies as the TRAK-RAK system is used to its full extent.

A 5 ton capacity toprunning TRAK-RAK Crane was installed in each of two 40 ft. wide bays to serve specially designed 18 ft. high material storage racks (Fig. 1). Each crane bridge has an overhead trolley, from which is suspended an electrically operated rotating column

position for handling palletized or crated material. For handling long boxes, bars, etc., the outside forks are flipped back into working position.

A TRAK-RAK feature which added to handling speed and insured safe operation was the safety interlock switch system which prevents the column from running



Fig. 3 — TRAK-RAK column requires minimum aisle space for operation.

into a rack and permits full rotation only when the unit is safely beyond the end of the racks.

The A. C. Leslie Company reports that a similar TRAK-RAK System installed in its Montreal warehouse permitted a 37% savings in capital building investment with equally good operating efficiency and economy.

For complete details on the TRAK-RAK System of vertical storage and handling, write the manufacturer:

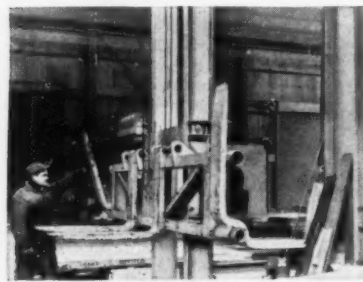


Fig. 2 — Carriage equipped with 2 pairs of forks. Operator is flipping outer forks up.

equipped with a special fork lift. All operations of the fork lift, which revolves to serve either side of the aisles, moves toward or away from the racks, and raises or lowers on the column, are controlled by the operator who rides with the carriage.

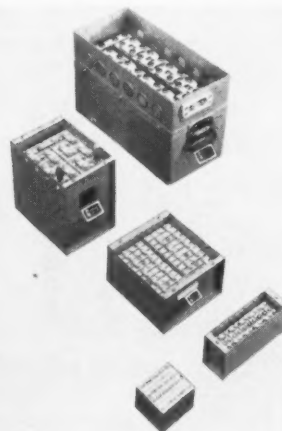
Two pairs of forks are mounted on the carriage. The outer forks may be flopped back (Fig. 2) leaving the inside forks in

Circle No. 161 on Reader Service Card for more information

NEW EQUIPMENT SECTION

Produces Nickel Cadmium Battery

A line of sealed nickel cadmium batteries is being marketed by the Alkaline Battery Division, Gulton Industries. Known as the VO Series for general purpose use, the

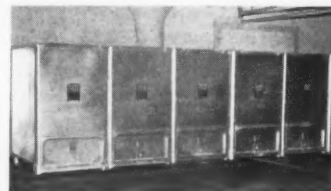


rechargeable line includes batteries with nominal voltages in multiples of 1.2 volts with rated capacities for 0.1 to 160 ampere hours. According to the manufacturer, the patented sintered plates used in the VO Series make possible the construction of cells with extremely low internal resistance, capable of delivering peak currents up to 20 times normal rated capacity.

Circle 272 on Reader Service Card

Carbon Steel Bins

Tote System Inc. has introduced a carbon steel, hermetically-sealed



Tote Bin. It is used for intraplant handling of bulk materials where product contamination and container corrosion are not considered factors. The containers are available in five standard sizes: 42, 74, 90, 98, and 110 cubic feet.

Circle 273 on Reader Service Card

CLASSIFIED ADVERTISING SECTION

USED EQUIPMENT—MEN—JOBS—LINES

Rates: for "Positions Wanted" \$8.00 minimum, limit 25 words. For all other classifications \$10.00 minimum for 25 words; each additional word 25c. Boldface type or all caps, \$12.00 minimum for 25 words, each additional word 35c. Box address counts as five words. All insertions payable in advance.

FOR SALE

The Eagle Wholesale Grocery Co. is out of business and has the following for sale: Steel pallet storage racks; 32" x 40" wood pallets; 4-wheel rubber tired Thomas Trucks, 30" x 60" beds; Moto-Truc electric pallet trucks and walkie straddle lift trucks for 32" x 40" pallets; Mobilift gas trucks. Contact Jerry Borstein, 22801 Aurora Road, Bedford Hts., Ohio, or call MONTROSE 3-5500.

Write for free brochure on new line of materials handling carts and trucks. Lynn Corp., Box 51, Marshall, Mich.

Job Hunting?

Here's a FLOW service to aid those who hesitate to answer "blind" advertisements in our Help Wanted column. Rather than jeopardize your present job by having your letter fall into the hands of your own employer or some other unwanted firm, just send FLOW a list of the "taboo" firms along with your letter. If the advertiser is on your list your letter will be returned.

AGENTS WANTED

All territories open on complete line of nationally advertised BFC steel shelving, parts bins, 2-wheel hand trucks, box trucks, shop carts, work benches, stools and material handling products. Commission basis, excellent potential. Send full details on your type operation. Write President, Bernard Franklin Corp., 2900 E. Hedley St., Phila. 37, Pa., Jefferson 3-4500.

HELP WANTED

Assistant Chief Engineer

Must be experienced in conveyors and special equipment for material handling including package handling, industrial, paint finishing, etc. Please reply giving full details, experience, education, salary desired and photograph for interview. Write c/o FLOW Box 2158.

Circle 97 on Reader Service Card



DOCK LEVLER

Speeds LOADING OPERATIONS — Cuts Loading Costs!

Loading or unloading gets under way quickly and safely with the Full Floating, Self-Adjusting DOCKLEVLER... No loose plates to handle... no motors... no controls and no dock attendant is required. Simple counter-balanced design eliminates complicated mechanisms requiring constant and costly maintenance. The DOCKLEVLER is available in Recessed Models, Package and Semi-Package Units... 6' x 6', 6' x 8' and 6' x 10'. All 20,000 lbs. capacity. All-welded, rugged steel construction. Write for full details and name of your local distributor.



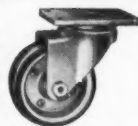
EQUIPMENT & COMPANY

968 Austin Avenue, ALBION, MICH.

J&S Superior NOISELESS CASTERS

WITH DOUBLE BALL BEARING SWIVELS

... a complete line for light industrial or institutional applications, designed for long life service. Renewable rubber tired wheels of finest grade compound.



30 Series
Swivel Caster
3 1/2, 4 or 5" dia.



48 Series
Swivel Caster
4, 5 or 6" dia.



50 Series
Swivel Plate Caster
With Wheel Brake
4, 5, 6, 8 or 10" dia.



52 Series
Swivel Caster
5 or 8" dia.



31 Series
Rigid Caster
3 1/2, 4 or 5" dia.



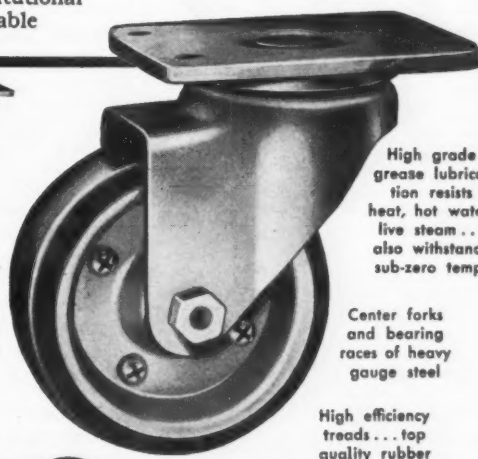
49 Series
Rigid Plate Caster
4, 5 or 6" dia.



51 Series
Rigid Plate Caster
4, 5, 6, 8 or 10" dia.



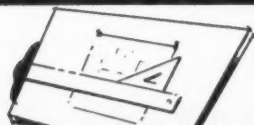
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Heavy Duty
Rigid Plate Caster
5 or 8" dia.



High grade grease lubrication resists heat, hot water, live steam... also withstands sub-zero temp.

Center forks and bearing races of heavy gauge steel

High efficiency treads... top quality rubber

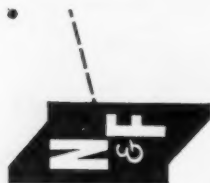


If you have a special caster problem send us detailed specifications of equipment and load carrying requirements. We will be glad to help you.

Jarvis J&S Jarvis, Inc.
PALMER, MASSACHUSETTS

In Canada: JARVIS & JARVIS OF CANADA, 1744 William St., Montreal, Quebec

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The difference
is in the shape
of the
STAVE!

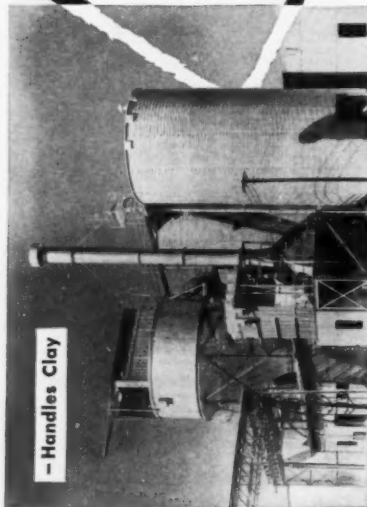
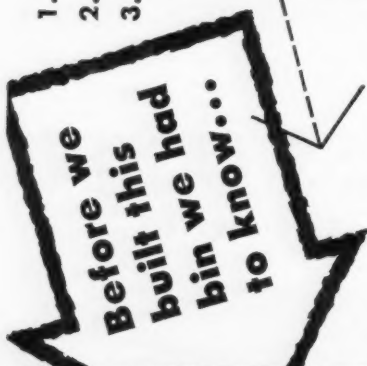
1. The characteristics of the material.
2. The method of loading.
3. The method of discharge.

Over a long period of years, we here at Neff and Fry have learned that a strong bin is only part of the storage problem.

While we do not sell machinery, nor are we affiliated with any machinery manufacturers, we can be of great help to you in suggesting loading and unloading systems.

On your next storage bin, call us in on the early stages of planning. You will have a better bin.

NEFF & FRY • Elm Street, Camden, Ohio



— Handles Clay

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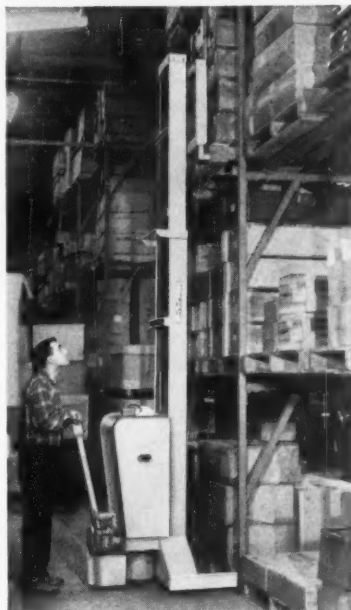
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LIMITED FLOOR SPACE SO...

...Stock Goes Up At B&H

WITH

**Walkie-
Worklifter**



Bell & Howell Company, world-renowned photographic equipment manufacturer, solved a common but troublesome storage problem—that of utilizing vertical "air" rather than horizontal floor space—with an Economy Walkie-Worklifter.

After reading the successful results, ask yourself if you haven't a similar problem that can be solved the same way—with equal success.

Bell & Howell Company

Mr. Carl M. Rhodes
 Sales Manager
 Economy Engineering Company
 4511 West Lake Street
 Chicago 24, Illinois

November 18, 1957

Dear Mr. Rhodes:
 The Slide Projector Division of Bell & Howell is located in a portion of a building originally designed as warehouse space. The floor area for this division is limited, and consequently the maximum utilization of the high ceilings must be made in order to operate adequately. In our Assembly hold area we find that the use of the Walkie-Worklifter saves us many man hours of material handling, and enables us to fully utilize this valuable air space in the storage of our parts.
 The small size of the Walkie-Worklifter makes it ideal in operating in a congested area, and we find the fact that the unit is self-propelled an extremely desirable feature. In the seven months this unit has been in operation, we have used it constantly.

Very truly yours,
 T. H. Gentry
 Production Control Mgr. Slide Projector Div.
 Bell & Howell Co.

Automatic lifter and transporter. Battery-operated with built-in charger. Push-button remote control. Automatic safety brake. Over 100 model variations. Lifting ranges up to 120". Baseframe widths from 26". Heights from 78". Capacities 1000 to 2000 lbs. Prices from \$995.

Write for detailed information.

Originators of materials handling equipment since 1901.

**ECONOMY
ENGINEERING**

4524 W. Lake St., Chicago 24, Ill.

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HANDLING

'round the country

(Continued from page 109)

Sandpile Thrower

Thomasville, Ga.—The problem faced by a mining company was to eliminate double handling



of sand in order to get the desired

piling location. It was solved by installing a piling machine which can distribute 140 tons of raw material an hour. This outfit carries material on an 18-inch-wide conveyor belt up to 35 feet off the ground and throws it in a stream up to 50 feet in any desired direction. In nine months of operation, the machine has handled 66,906 tons of sand. During this time, only four bearings have been replaced; the belt is still in good condition, according to a company spokesman.

Circle 280 on Reader Service Card

Loads Pipe With Ease

Los Angeles, Calif.—An easily removed attachment (called



a handling bar) converts a fork-

truck into a pipe mover. The picture shows one saving a refinery's money by loading pipes—held at either end by a hook and cable—on a truck without using spacers between the pipes.

Circle 281 on Reader Service Card


The Lady Is a Lumberman

Hollis, N. H.—A 120-pound woman is in the driver's seat of a tractor shovel used for logging



operations at a sawmill. The machine is fitted with a fork welded to a backstop for log handling, and uses a bucket for yard clean-up and road maintenance. The fact that the shovel outweighs her by six tons doesn't daunt the lady behind the wheel—she uses its power shift torque converter and power steering to jockey it over the teeth-rattling terrain.

Circle 282 on Reader Service Card



**KEY TO
LOWER
HANDLING
COSTS...**

**SEND FOR A
CATALOG**

**FAB-WELD
CORPORATION**

SIMPSON, LACKAWANNA COUNTY, PENNSYLVANIA

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HAVE**

Longer Lasting "Muscles"

20 Years without a single bearing failure is a testimonial to the fine engineering and maintenance-free construction of Metzgar Conveyors. Ball race is cyanide hardened. Retainers rate-finished for smoothest running. Trust the "problem jobs" to Metzgar know how.



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FLOW

Down goes a Magliner



DOWN GO LOADING COSTS!

And they'll stay down with Magliner magnesium dock boards on the job! Magliners speed loading, eliminate dock congestion . . . get extra work from power trucks and other loading equipment. Costs go down and stay down because Magliners are magnesium light—easy to put down . . . easy to move. No heavy lifting . . . no injury hazards. Mens, loads and equipment move *fast, sure, safe*—protected against accidents and costly damage.

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Put all these advantages to work for you . . . put Magliners to work on your dock!

MagLiner
MAGNESIUM
DOCK BOARDS

Canadian Factory:
Magline of Canada, Ltd., Renfrew, Ontario

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Please send me my copy of "How to Cut Dock Loading Costs."

Check here
for information on:

- ☐ Movable Dock Boards
- ☐ Permanent-Type Dock Boards
- ☐ Mobile Loading Ramp
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- *Valued*—every subscription to FLOW is paid for by a leading distributor in the material handling market.

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